The American Journal of

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APRIL MCMXV

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The American Journal of
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Dentistry and Medicine Drawing Closer Together

WHILE it is true that dentistry was born outside the ancestry of medicine, yet, as a modern science, it could not avoid affiliation with and adoption into the family of medical sciences; and it was, indeed, under this prestige and these auspices that it has established its claim as an independent professional vocation.

The hour has now well-nigh arrived, if it has not already struck, for the breaking down of all artificial barriers, and the consummation of a complete kinship between the two. So much of the life-blood of medicine has, in the past few years, flowed into dentistry, and so much of the vital essence of dentistry has been incorporated into medicine, that the relationship between them may now be regarded as a blood relationship. Never was the time more propitious for the cultivation of a broad science of stomatology, in which both medicine and dentistry should pool their respective interests; and never were both medical and dental professions more fertile for its cultivation.

The dental field, in particular, has undergone wonderful changes in this respect in the last comparatively short period of time, almost within the last five or six years. The great modern doctrines of systemic infection, of autotoxosis, and of biologic pathology, have overshadowed the purely mechanical viewpoint which for a time threatened to stultify dentistry, and have led it out into the broader domains of etiology and prophylaxis. It no longer suffices the intelligent dentist to know the influence of defective teeth upon digestion; he seeks to know something about the influence of defective metabolism upon the teeth. Most of the dentists of the modern school are nowadays making use of physiologic laboratory and clinical diagnostics, such as the urine analysis, the Wassermann reaction, and the like, for an interpretation of dental conditions; and are reinforcing their local treatment of the teeth and mouth with internal, systemic remedies, and prophylactic measures.

A conspicuous example of this attitude of modern dentistry toward the etiologic and pathologic doctrines of modern medical science is seen in the recent investigations, conducted jointly by dentistry and medicine,

upon the subject of pyorrhea alveolaris. Curiously enough, this subject, which for many years has been the point upon which, of all others, medicine and dentistry have clashed, seems destined to be the very point upon which they will reunite. For several years medicine has been insisting upon the systemic character of pyorrhea, while dental pathologists have been advancing arguments to discount its systemic etiology—to establish its purely local entity, and bacterial origin. Now come Barrett and Smith, of the University of Pennsylvania, representing respectively the dental and the medical departments, and by a masterly series of research and experiment, demonstrate that pyorrhea is an amebiasis, due directly to entamebæ, to which, of course, the metabolic condition of the body contributes its etiological role; and this demonstration has been confirmed by further investigations by Bass and Johns in the Tulane University.

The significance of this denouement in the matter of pyorrhea is not merely that there is no longer any ground for dispute or differences between medicine and dentistry on this particular subject, but that it resulted from the joint constructive work of the two professions, and, most important of all, that it calls upon medicine and dentistry to join hands and merge their forces in a concerted and intelligent crusade against this widespread disease, both by prophylaxis and by cure, the way to which is fortunately pointed out by the same investigators who taught us the nature of the disease. And the still broader significance of it is that this particular instance is but typical of the trend of affairs all along the line, as between medicine and dentistry.

The truth is, that in the course of their steady advance, the lines of medicine and dentistry have drawn closer and closer together, until they are now in contact along the entire flank, and henceforth they must campaign as two wings of one army.

Abandoning all figures of speech, and speaking in plain language, the time has come for closer cooperation between the doctor and the dentist. There is no longer the sharply drawn line of distinction between them that there was formerly. Their work and their interests overlap at a thousand points. The dentist must from now on be more of a doctor, and the doctor must be more of a dentist, and both must be oral hygienists and prophylactors.

If doctors and dentists themselves do not realize this, the public does, and will force them into cooperation. You cannot keep the public out of professional confidence any more; and it is a splendid thing, both for public and for profession, that you can't—just as fine a thing as the open Bible was in religion. The capital article on Pyorrhea recently published in the *Associated Sunday Magazine*, from the pen of Dr. Edwin F. Bowers, is an exemplification of the place the public occupies in relation to this and other medical movements.

But I am sure that the medical and dental professions do not need to be told of their duties and privileges by the public. They realize them and will meet them, as they have always done. Neither one of us, doctor nor dentist, can cope with the tasks before us alone. Each of us needs the other. We are, as I have intimated, wings of the same army, and, for the best results, must cooperate, consult together, hold up each other's hands, exchange each other's viewpoints, work side by side. The doctor must call the dentist in consultation, and the dentist the doctor; and both must take the public into their confidence.

Here is a big field for missionary and organization work, not on the basis of sentiment, but of genuine, practical, progressive efficiency.

To live! But just to live! No matter where;
To hear and see; to breathe God's boundless air;
To play in this great world an eager part;
To feel the strange I AM throb in the heart.
To live! 'T is something more than plod and grind;
Life is a thing of spirit, soul and mind;
The reaching out and on of growing powers,
The change to higher forms of what is ours.

—Mary E. Allbright.

BACK TO DRUGS AGAIN

The belief in witchcraft was universal. It was founded on theology, and buttressed by confessions of persons who knew they would be burned alive in consequence. The clearest evidence in the courts confirmed it, and such legal giants as Matthew Hale sentenced men in accordance. It was never disproved; but as the human mind developed and human knowledge and intelligence increased, the world finally arrived at the place where it refused to believe in the possibility of so monstrous a thing. This sentiment grew from the bottom up, until it permeated the world's thought.

The Northmen were passionately devoted to their martial creed, and their warlike gods,

Odin and Thor, exactly suited them; as did Valhalla, their conception of a desirable hereafter. Yet, despite their fierce opposition, the tender teachings of Jesus, the gospel of love, gradually supplanted their native cult.

Human thought does not move directly or uniformly, but imperceptibly, by waves, and with a pendulum swing to one side and the other. The austerity of the Commonwealth of Britain was followed by the debauchery of Charles II's era. In the fifteenth century, men demanded that all should think and believe alike; and they desolated the world in their endeavor to compel all to accept the creed of the sect that was in power in each country. So, the Romanist burned Huss, and Calvin burned Servetus. Now we have veered to a respect for the rights of the individual, as to creed and practice, that approaches closely to indifference.

The doctrine of states' rights reached its climax in secession. For half a century since then it has receded, until today the centralization has gotten to a point that would raise the spirit of Jefferson in wrathful protest, were such things possible.

The medieval conditions of drug-therapy were endured until endurance reached its limit, and the reaction was irresistible. The inefficacy, the uncertainty of the ancient drugging finally was realized and the whole mess cast overboard. For years the use of drugs has been a matter "for laughter, tears and jeers." The resort to surgery and other mechanical measures was in response to the universal demand for something definite, something swift and certain, to replace the old guesswork. So, the pendulum swung far to the right, far beyond the safe and sane center.

A few years ago, we saw that the limit of the pendulum's oscillation had been reached. The violence of the denunciation of drugs showed the beginning consciousness of opposition; just as the intolerant assertion that wheat must rise from $1.65 to $2.00 indicates that it is time to sell. Evidences of a reaction were manifest. CLINICAL MEDICINE announced the coming renaissance of drug-medication.

But time was necessary. The sober common sense of men told them that the absolute proscription of drugs was a mistake; however, this required time to permeate the consciousness of the profession. Besides, the faults of the old materia medica were too glaring, and they still existed. We could not go back to that mess. The greed of foreign novelty exploiters and of nostrum devisers, foreign and native, had also been pushed to the point of exciting disgust. The medical profession stood ready to return to drugs, only they must be drugs worth while.

The key to the situation has been furnished by emetine. The brilliancy of its triumphs dazzles our eyes. We stand amazed to think that all these centuries we have held in our armories so powerful a weapon without comprehending its possibilities. And not the least of our wonderment is, that ipecac should have been originally introduced, five hundred years ago, as a remedy for exactly the malady in which its present triumph is made—dysentery. Yet, possessing this perfect means of control over that disease, we have permitted outselves to go so far in the surgical path as to contemplate opening the abdomen and incising the bowel, so as to permit of irrigation.

Straight home to everyone of us come the two obvious deductions: there must be similar inestimable qualities inhering in other medicinal plants, and the observations of the older, prelaboratory practicians are the place to look for probable uses of these remedies. Already the older works on therapeutics are spoken of as probable mines of rich gems.

Most fortunately, we have at our hand the means of pursuing this investigation. The works of the alkaloidists give us an array of weapons of the finest temper, ready to apply. These afford the opportunity to strike swiftly and surely as with the surgeon's knife. Among the numerous advantages of this therapy, may be enumerated the following:

The remedies are absolutely uniform and certain; every dose acting precisely like any other dose of the same medicine, in quantity and quality of potentiality.

The action of the alkaloids has been studied scientifically, the experimenters having been driven from the galenics to the active principles in order to enable them to do their work at all. For years, we have been asking why we could not have the same precision in practice that they demanded in experimenting. Why, indeed?

The action of these principles is swiftly developed, and precious time often is saved thereby. Every physician accustomed to their use will claim possibilities from his treatment that the other practicians will not allow as being possible.

The active principles are absolutely free from commercial control. There is with them none of the greedy extortion of the patented-chemical vendor, the conscienceless urging of the remedy for everything to which

humanity is liable. Every pharmacist is free to prepare and vend every alkaloid and glucoside mentioned in the Dispensatory. If any one of these gentlemen has a preference over his fellows, it is simply that he has, by good work, established a reputation for his goods—and, surely, that is no drawback. Any other may do the same, if he will. We may prefer any man's goods if he makes them preferable—and we ourselves are the sole judges, not he. If any of these alkaloids comes into general use, the Pharmacopeia may adopt it and prescribe the legally binding properties, to which any manufacturer must conform. The ethical standing of the alkaloids is impeccable.

There is this radical difference between the old and the new therapeutic agencies, namely, the latter are applicable to conditions rather than to diseases. Even though emetine has proved itself as a specific against the amebas, this will prove exceptional—the active principle acts by and through the vital processes and is evaluated by its power of influencing these toward physiologic equilibrium. This again necessitates a definite conception, on the part of the physician, of the derangement of physiologic function—and this is the first and principal objection brought against the use of the alkaloids. They demand a knowledge of physiology and its pathologic derangements far beyond the capacity of the ordinary practician. He is fairly qualified to recognize smallpox, and to differentiate it from measles and scarlatina; but to peer into the human body and determine exactly the function that is deranged, as the watchmaker peers into the little mechanism and detects a speck of dust among its wheels, that is too much to ask.

To this, we answer briefly, Bosh! The average, nonspecializing, American doctor knows far more than he is credited with. He possesses exactly the knowledge needed here, and is, in fact, better prepared to recognize derangements of physiologic function than to denominate diseases correctly, that is, nosologically. Very often, it is true, he does not know that he knows these things—he is not accustomed to have the questions put at him in this way. He is like the candidate who failed to describe morbilli, when he could have given a vivid description of measles.

Another objection we now hear is, that, if the alkaloids are so very valuable, why is it that the discovery of their values is left to "outsiders," nonalkaloidists? Why have not the men who have devoted themselves to the study and exploitation of the active principles made their mark, as has Rogers with emetine?

When we hear that, you may hear our smile clear across Chicago's length of twenty-five miles. There is extant a large library of alkaloidal literature, comprising such authorities as Burggraeve, Castro, Van Renterghem, Laura, besides an army of others, scarcely less luminaries. And are not the many, many "gems of purest ray serene" dug from these mines, polished and reset, and presented in the two great textbooks on "Therapeutics" and "Practice"? Go to, brothers! Get busy and climb into the wagon before it passes you by.

As to emetine, it was only after the ameboid and bacillar forms of dysentery had been separated that Rogers could demonstrate the value of this alkaloid. Still, you may find plenty of other values related anent this active principle in the works mentioned; and they are well worth your investigation. And also about lobeline, gelseminine, solanine, cicutine, brucine, and many more.

Remember that there are several roads, as many as there are people, all leading toward the light. No two go just the same. Some make cross-cuts, others go round-about, and it takes longer, but all eventually reach the same goal. If one's actions displease, simply know that he is going another road than yours, just as good a road, and just as near, perhaps, but another one. You will meet and smile at the end of the journey, and at cross-roads along the way.—Susanna Cocroft.

HOSPITAL NEGLECT: A CONCRETE ILLUSTRATION

A few months ago we printed here a general criticism of the shiftless and inefficient way in which most of our hospitals—even our best-reputed ones—are conducted and insisted upon the crying need of reform in this direction. A specific case has recently come to our attention which so pertinently and powerfully points our moral, that we feel constrained to relate it. No names will be mentioned, either of the hospital involved or of any of the persons who were parties to the occurrence, as it is not our purpose to enter a direct accusation against any institution or to raise a personal controversy; our aim merely is, to drive home, by a specific instance, the general lesson which we conveyed in our former editorial. The reader must take our word that the incident here to be related is an actual happening, to which we add nothing and from which we take nothing away.

An old physician, a good friend of ours, living in the middle west, had a daughter who was a trained nurse and was in the employ of the health department of the city in which she resided. This young woman was taken sick with some affection of the throat, which, judging from all accounts, appears to have been a suppurative tonsillitis; however, the precise nature of the trouble is an immaterial detail.

Being a graduate of the training school of one of the largest and most influential hospitals in her city, this nurse went to one of the head surgeons of that institution for diagnosis and treatment. This gentleman advised her to enter the hospital as a patient, at the same time instructing his assistant—also a surgeon of some attainment—to go and attend her. The sick girl did as told. The assistant, it seems, was very busy; at any rate, he was a "surgeon," and, from all he could gather, this was not a "surgical" case; consequently, he delegated the care of the case to another man. As a final result, for ordinary care, the patient finally fell into the hands of a hospital interne.

The hospital, by a similar process of deputation, did not even put a trained nurse in charge of the case, but left the patient in the hands of a green, inexperienced cadet. So it was that the sick woman, who had gone to this hospital (and the school of which she was a graduate) for the express reason that there, as she naturally and by right supposed, she would have a guarantee of care and professional skill which she could not have at her home, found herself committed to the tender mercies of a young, untutored interne and an equally unsophisticated cadet nurse.

The result is hardly to be wondered at. The abscess in the patient's throat continued to increase, but little was done to relieve it; neither nurse nor interne, when they could be induced to visit the bed, recognized the gravity of the condition or saw any cause for alarm.

Only when this poor young woman actually was choking to death was it thought worth while to call adequate medical and surgical help. Even then no surgical intervention was undertaken—not even the very obvious and simple expedient of a low tracheotomy—and the patient died. And her death was the result, so the young woman's father believes, not of the natural, inevitable effects of her complaint, but of an inexcusable, easily preventable accident in a disease of itself relatively innocent. And that, in a large, well-equipped hospital, supposed to guarantee the maximum safeguard against precisely this kind of *contretemps*.

As we have said, we are not pressing the interests of this particular case. The father of that unfortunate woman, who himself is a doctor and therefore understands and feels with special keenness the needlessness of his daughter's death, naturally is extremely indignant and bitter toward this hospital and the physicians involved—as, indeed, he has good reason to be—and may yet institute proceedings against those implicated in this affair. Nobody will blame him greatly if he does; assuming his statement to be correct.

However, we repeat, intensely as we sympathize with our friend in his loss and in his indignation, it is not with the personal aspect of the matter that we are here concerned. It is not the particularity of this instance which gives it public significance, but the fact that such things are possible. Fortunately, such cases do not often result quite so seriously as did this one; but there is hardly a physician with hospital experience who has not encountered *some* of the results of hospital carelessness and neglect.

The instance we have related, in fact, furnishes a powerful exemplification of the very defects which in our previous article we pointed out in hospital administration. The features of hospital service which are supposed to constitute its superiority over home service—its organization, its equipment, its facilities, its continuity—are the very features which, when allowed to run to seed, constitute the danger and the false security of the hospital.

But these are exactly the features of hospital service that *are* being allowed to run to seed. The organization of the hospital is permitted to degenerate into a careless shifting of responsibility, from one to another, until the patient is hopelessly removed from direct responsibility altogether. The equipment and facilities of the institution come to stand for the mere shadow of efficiency and safety, instead of for the substance. And the much vaunted continuous watchfulness of the establishment lapses into the mere formal maintenance of a shift system of attendants, to satisfy the letter of the claim.

We repeat, the hospital, as an institution, is badly in need of reform; and it is the business of the medical profession to see that such reform is carried out. It is a matter in which the whole profession is responsible to the public. If we do not reform the hospital ourselves, the time will come—and will not

be long in coming, either—when the public will undertake the job for us.

The great thing in all education is to make our nervous system our ally instead of our enemy. It is to fund and capitalize our acquisitions, and live at ease upon the interest of the fund. For this, we must make automatic and habitual, as early as possible, as many useful actions as we can, and guard against the growing into ways that are likely to be disadvantageous to us, as we should guard against the plague.—William James.

NARCOTIC-LAW DEVELOPMENTS

Last month we told you that Commissioner Osborn, of the United States Bureau of Internal Revenue, had made the ruling that physicians who dispensed narcotic drugs while in their own office would be required to keep records thereof. Since the publication of this fact the Bureau has extended the record requirement to all dispensing or distribution of narcotics on the part of doctors, dentists or veterinarians, *with the single exception of such drugs as may be personally administered by doctors to patients.* The ruling reads as follows:

> You are advised that for the purpose of checking up the quantity of drugs coming within the scope of the Harrison Antinarcotic Law, received and dispensed, this office deems it necessary for a record to be kept of all such drugs so dispensed or distributed in the office of the physician, dentist, or veterinary surgeon. A record must be kept also of these drugs left with a patient to be taken in the absence of a physician, dentist or veterinary surgeon. Only such drugs as are administered directly to the patient by the physician in person, when away from his office, are exempt from record.

This regulation will mean that records must be kept of 95 percent of all the narcotic drugs which the doctor may dispense. As a matter of fact, he may as well keep a record of everything, and in case of doubt we advise him to do so.

We wish to add, however, that while the Commissioner's ruling is undoubtedly made in good faith and presumably is based upon the Harrison Antinarcotic Law, as a matter of fact it is not the law, and we give it as our opinion, based upon good legal advice, that if this matter is brought into court, as eventually it is likely to be, his ruling will be set aside. The law distinctly says that the physician shall keep a record of such narcotic drugs dispensed or distributed "except such as may be dispensed or distributed to a patient upon whom such physician, dentist or veterinary surgeon shall personally attend."

I believe that any intelligent person reading these words will have difficulty in reading into them any such interpretation as that afforded us by the Commissioner of Internal Revenue. The law says nothing about "visiting" a patient or calling to see a patient, nor does it intimate any restriction of the meaning of the words "attend upon." Also, anyone conversant with the history of the law and knowing the great care taken by those who drafted it to exclude any such meaning as that read into it by Commissioner Osborn must contend that he is mistaken. The discussion of this very section on the floor of the United States Senate bears out my contention.

Commissioner Osborn's ruling is not law. We wish to insist again upon this point, and we wish to state again our firm conviction that just as soon as a test case is made, his position will be reversed. Nevertheless, we advise every physician to obey to the letter the regulations laid down by the Treasury Department. The record-keeping requirement, while onerous, is bearable, since it does not interfere in any way with the physician's right to dispense his own drugs. Our fundamental objection is to the assumption that any government official has the right to read into any law a meaning which is not clearly expressed in the wording of the law itself.

TREATING EXOPHTHALMIC GOITER

The Texas State Medical Journal contains an interesting article by Dr. R. W. Baird on the medical treatment of exophthalmic goiter. In it, he speaks of the very indifferent treatment inflicted before the surgical era, but under which, nevertheless, patients were leaving the hospital decidedly bettered by their temporary stay. From this, he deduces the proper treatment to consist in prescribing rest, fresh air, and diet; naming these as essentials.

Rest must be mental, physical and nervous; and this includes emotional rest. Relaxation must be complete. The day and night should be regulated by hours, the manner of spending each period being specifically provided for. A tactful nurse helps.

Fresh air relieves headaches, promotes sleep, and aids in the assimilation of food. This is one of the reasons why the patient generally is better in warm weather, when much time may be spent in the open air.

The diet should be nutritious and appetizing. Baird speaks specifically of milk and eggs, as sometimes giving the best results and overcoming wasting, while preventing

intestinal toxemia. He might well have added the fruit-juices as aiding greatly in this respect. Limitation of nitrogenous articles is essential, but may be carried too far, and debility result. The lighter proteids should be preferred, especially fish and sea-foods in general. Many delicate patients can utilize oysters, clams, scallops, turtle, crabs, and crawfish who would suffer after a steak or a cutlet. Turkey is good, provided the tendency to overindulge is controlled. The quantity of all meat-foods should be carefully prescribed, and increased or diminished as the sequences are noted.

Milk is best taken warm from the cow, or warmed and salted to taste. It is to be eaten rather than drank, that each portion may be duly insalivated and digestion be well under way before the morsel leaves the mouth. Whole or top milk should be employed alone. Buttermilk, kumiss, kefir, matzoon, Devonshire cream, and very especially the Bulgarian-bacillus preparations are useful variants of a diet likely to become monotonous without any changes.

There is scarcely a limit to the number of ways in which eggs may be served, and a new one should be used each day. One of the most useful methods of resting is the care of chickens; while the satisfaction of having actually fresh-laid eggs counts for much.

To return to Doctor Baird. Diarrhea indicates profound toxemia, although constipation is not uncommon, and here toxemia is a matter of course. Mild laxatives are indicated. Light massage and hydrotherapy prevent muscular atrophy and give tone to the vasomotor system.

Bromides, and an ice-bag over the heart, aid in controlling its aberrance. Do not use cardiants, unless the indication for their employment is clear—they are not essential to exophthalmos, in itself. Cardiac weakness, tachycardia, increasing dulness, arhythmia, or swelling ankles call for these remedies; and this, to Baird, means digitalis.

Early diagnosis is of great importance.

Then he proceeds to kick over the whole basket by adding that "in a majority of the cases medical treatment should be only preparatory to surgical treatment."

If the use of effective intestinal antiseptics were added, and care taken to forbid as closely as possible sexual excitement and indulgence, the results would be much less likely to justify this pessimistic conclusion. Few realize the degree to which fecal toxemia is responsible for exophthalmos, or the value of wise treatment persistently followed up. And we fail to see how any intelligent physician can overlook entirely the splendid results obtained by Forchheimer, and by the numerous practitioners who have adopted his methods, through the use of quinine hydrobromide and ergotin in generous dosage.

However, we are far from criticizing or belittling this paper. We are too grateful for any evidence that any number of the profession feel disposed to listen to any suggestion for medical treatment. We have so long heard the cry, "No treatment but the surgical," that we welcome any evidence of relenting its rigidity.

An old English lord, visited by the son of a friend, tried to enter into conversation with him, but to each remark the young man would acquiesce by saying "Yes, yes," and no more. Finally the host, becoming disgusted, cried, "For God's sake, say 'No' once, so there be two of us!"

PROVIDING THE AMMUNITION

American physicians are feeling the pinch of the war in Europe. This is particularly true in the south, and to a lesser degree in the New England states and other industrial communities depending largely upon the sale of manufactured products. Physicians of the central west, where ready money comes from the sale of wheat, corn, hogs, and cattle, are doing very well indeed, thank you! However, that does not help our brethren to the east and south. Frankly speaking, many of them are hard up—mighty hard up! They need that essential ammunition for the great battle of life which all of us must have if we are to prosper in this world, and that is—*money*.

To the doctor, after all, money is one of the indispensables. He cannot live on good works alone. He cannot live because people love and respect him. He cannot live even in the consciousness of superior professional ability and skill. He must sell himself for money—and *get* the money—if life is really to spell success for him. Sounds sordid, does it? But it is true, and the sooner every one of us learns its truth, the happier we shall all be in the end.

The average doctor earns money enough; the trouble is, he doesn't get it. His patrons have gotten into the bad habit of taking it for granted that his pockets are lined with coin, and that, really, he doesn't need to be paid—at least only rarely! They have to pay the grocer, the tailor, and the undertaker. They have dimes for the nickel show and dollars

for the theater, but nothing—or but little—to defray the expense of bringing baby into the world.

This condition is dead wrong, and we want to change it if we can. In previous numbers of CLINICAL MEDICINE we have talked about this problem and besought our readers to help us. We know our big family appreciates these efforts, and it is our purpose to continue them, yet doubtless you all feel, as we do, that we have not yet found a solution to the problem. However, we shall keep on with this work, as you will see.

Read in this issue Mr. Gifford's fine paper upon "Why Doctors Fail." Think it over carefully, and then write to the editor and tell him some of your own money problems. These letters will be turned over to Mr. A. D. Brush, credit man for a large pharmaceutical manufacturing house, who has been studying this problem from the doctor's standpoint and who is anxious to give practical and concrete service to the profession. He wants to hear from just as many doctors as possible, with samples of their stationery, copies of the statements and bill forms which they use, a description of the bookkeeping method which they employ and of the plans which they have used with success, or without it, in the collection of their accounts. Tell your troubles to Mr. Brush, and in the May number of CLINICAL MEDICINE he will "start something" which I believe will be of the utmost practical value.

The paper which Mr. Brush will contribute —there may be several papers before he gets through with the subject—will, you can depend upon it, *get right down to brass tacks*. That's what you want, I know, so when you write him (and us) please be specific. The harder the nuts you have to crack, the more pleasure it will be for him to help you crack them.

If I stoop,
It is but for a time. I press God's lamp
Into a dark, tremendous sea of cloud
Close to my breast; its splendor, soon or late,
Will pierce the gloom: I shall emerge one day.

—Browning.

HUNT FOR THE DIAGNOSTIC DOLLARS

I have just come across an article by Dr. John N. E. Brown, published in *The Canadian Journal of Medicine and Surgery*, of March, 1915, in which a story is told of Dr. William J. Mayo, of Rochester, Minnesota, a story which pleases me so much that I am going to reprint it herewith for your pleasure also. Please read it:

"You know," said Doctor Mayo "some of our bright young men will spend hours investigating a case and find a long list of signs and symptoms, and perhaps overlook the two great diagnostic points in the case, the mass under the liver and the colic. I know one of these young men, a graduate of an A 1 college, with a good training here. After looking around for a place to settle, he came to me to say that he believed he would go out to a certain locality. 'There's only old Doctor Smith there,' said he, 'an old fogy. He's twenty years behind the time; he can't do a blood count, a stomach analysis, or any of these new stunts. I believe that is the place to start.'

"The young man went to the place, and I learned that his pride was very much hurt on one occasion.

"After making a very careful examination he found a number of diagnostic pennies and nickels, but was uncertain what the real trouble was. The family getting anxious, called in old Doctor Smith, who, after a few moments, made a positive diagnosis on a couple of ten-dollar-bill diagnostic points, much to the dismay of the young man. Doctor Smith was trained to look for big things upon which the diagnosis of most diseases can be made.

"You know," Doctor Mayo went on, "there are everyday diseases and Sunday diseases. Give me the man who can make a diagnosis of an everyday disease. We sometimes find a man who can make a Sunday or holiday diagnosis, but who is an utter failure on the everyday diagnosis.

"Now take the subject of occult blood, for instance. We hear a great deal about occult blood. 'Occult blood'—you know what 'occult' means. You remember, years ago, when we were younger, occasionally Hermann, Keller, and other magicians used to come to town. You have seen them." As he said this, Doctor Mayo's twinkling gray eyes were turned inquiringly upward under his heavy eyebrows to the visiting doctors ranged on the observation stand.

"The town people all turned out. One of the stunts the magician did was this:

"He asked someone to lend him a top hat. Well, about the only fellow in the town who owned a top hat was the sheriff. (You know the sheriff is always a good fellow, he has to be a good fellow, a popular fellow, or he wouldn't be sheriff. And he wears a top hat.)

"Well, everybody looked at the sheriff, and they called out to him to lend his hat. So the sheriff, getting red in the face, handed up the hat.

"The magician took the hat, covered it with a cornucopia, and gave it a shake. He then put in his hand and pulled out a big bouquet of flowers. He put in his hand again and hauled out a rabbit. He then withdrew to the rear of the platform, stumbled and fell upon the hat, apparently accidentally, crushing it flat. Everybody laughed. The magician looked horrified at the damage he had done to the hat. But with a few magic movements he restored it to the sheriff as good as new.

"That is doing the occult; that is what occult means. So whenever I hear about occult blood, I think of Keller and the sheriff's hat.

"Our own laboratory diagnostician triumphantly reports that in a stomach analysis he has discovered 'occult blood.' Now, what does that mean? Well, it doesn't mean much to me. What definite information does it give? Little or none. This blood may come from an ulcer, or a carcinoma; it may results from the use of the toothbrush—you have heard those fellows cleaning their teeth in the morning in the sleeping car, which operation sounds like an old woman scrubbing the front steps. Well, those fellows will have 'occult blood.' It may also result from eating meat; and from other sources. You can't count upon it. It is one of the diagnostic pennies."

This straining after the comparatively unimportant was emphasized over and over again by the chief as he handled the intestines, dissected and stitched.

"Ochsner," exclaimed he, looking up again. "tells a good story, as he alone can tell it with all the frills. I cannot attempt to reproduce it as he tells it. It was in regard to a preacher who came to take charge of a church in a certain village. Now there belonged to this church a horse trader. The preacher needed a horse, and, naturally, turned to the horse trader to procure one for him.

"So he asked the horse trader if he would sell him a horse. A great struggle took place in the horse trader's mind. It is delightful to hear Ochsner describe the agony of the man—torn with conflicting emotions—his desire not to cheat the preacher—to overcome his long-acquired habit of over-reaching, and, on the other hand, to make something on the deal. He did not want to lose his status in the church, neither did he want to lose his reputation as a horse trader. The horse dealer asked for a day's grace. The interval was one in which there was a great battle in the man's conscience. The following day the minister returned and inquired if he had picked out a horse. The trader replied that he had, and set the price. 'But,' said he, 'he has one or two faults I ought to tell you about.'

" 'What's the matter with him?' queried the parson.

" 'Well,' the trader replied rather hesitatingly, 'if he gets loose you can't catch him.' The preacher thought for a moment 'Oh! that's all right,' he said, 'I am going to keep him in the stable, when I am not driving him. He'll never be loose. I'll take him.'

"So the preacher took the horse, hitched up, and drove off. But before he got many yards away, the horse trader, conscience-smitten, ran after him to tell the truth; and in a state of great agitation he blurted out, 'When you do catch him, he ain't worth a darn.'

"That's the way with some of these diagnostic findings," concluded Doctor Mayo with a smile, "when you do get 'em they ain't worth a darn."

* * *

Of course Doctor Mayo is not opposed to the work done by the diagnostic laboratories. Quite the contrary. The marvelous institution which he maintains, in association with his brother, is equipped with every diagnostic refinement possible, and their laboratories are doing much beautiful work of this character. Doctor Mayo believes in the laboratory, but he does not believe that it should be "the whole show."

Neither do we. The fact is, no good doctor can practice medicine by proxy. He must know what he is about; he must be trained in mind and skilful of hand. He must be able to see the things which other men cannot see and feel the things which other men cannot feel. He must have a broad grasp of every situation and of every problem. The eye which is constantly glued to the objective of a microscope is likely to have a restricted field of vision, and it is this narrowness (of mind rather than of eye) to which Doctor Mayo objects. The laboratory has become an essential, and no doctor should try to get along without it; but he should look upon it as an adjunct—and an exceedingly valuable adjunct — to his work. That's the moral.

Use the laboratory every opportunity you can get to do so, but cultivate for yourself

a broad vision so that seeing all you can understand all.

Far out on the deep there are billows,
Which never shall break on the beach;
And I have had thoughts in the silence
Which never shall form into speech;
And I have had dreams in the valley,
Ah me, how my spirit was stirred!
They float through the valley like virgins,
Too pure for a touch or a word.

—Father Matthew.

SOME NATIVE REMEDIES WORTH TRYING

The Eclectics have devoted themselves especially to observations in the sick-room, and also have made a study of the action of our native plant-drugs. Although these observers, more particularly the older ones, may not have been up to the present standard in the sciences that underly the healing art, it does not follow that they were altogether blind or incapable of observing correctly and reasoning logically from their experiences; and now that we are cut off from our German sources of supply it well may be that among our wild-growing plants, as used by certain American practicians, we can find some neglected resources of value.

Very little is to be found on the native drug-plants in any of the textbooks in common use. American writers and compilers have closely followed their European teachers, and, except Bartholow, scarcely one has had the courage to investigate the Eclectic works. The Eclectics, on their part, have followed a similar, though opposite, course, and have confined themselves to their own peculiar materia medica, with some material taken from the Homeopathists.

Waugh, as a freelance, has taken pains to sift from the Eclectics' store whatever seemed likely to possess value, especially when the remedies had also been tried to some extent by regular practicians. In his writings, he presents the evidence as it came to him, leaving the reader to apply it at his own discretion. Waugh feels convinced that there are many remedies of real virtue among these native plants, but that the evidence as to their powers and applicability is suggestive rather than conclusive in most cases.

Of Electicism, John Uri Lloyd is the head and front. His books and other literary productions present Eclecticism pure and undiluted; his genius and scientific proficiency make it respectable and honorable; while, in the practical aspect, the "specific medicines" of the Lloyd Brothers have pushed out the competitive preparations almost completely. Thus, today, he stands as the exponent of this separatist school. Without John Uri Lloyd and the knot of able men connected with him in Cincinnati, and our own Ellingwood here in Chicago, the Eclectic school would have died long ere this. However, with the full and unqualified recognition of the merits of our native materia medica, the last excuse for the existence of Eclecticism will have passed, and it will have finished its work —a great work, in truth.

In the following we present a few characteristic extracts from the writings of Professor Lloyd and other leading Eclectics, which may illustrate the possible values in their remedies, but also showing the uncertainty of the evidence in their favor.

Rhus toxicodendron is indicated in scarlet fever by the dark-red or livid skin, buccal mucosa red, tongue narrow and glazed, pointed, dark with brown coat, breath discharges offensive, vitality failing fast. Very small doses of the specific medicine, 1-6 to 1-3 drop every hour. Rhus has been studied by Aulde and others. It ranks with cantharidin and delphinine; and it has been recommended especially in muscular pains, leaky bladder in women, nervous debility, and cutaneous affections requiring stimulation.

Salix nigra aments are sedative to the reproductive organs. The drug is fully replaced by salicin. All salicyl preparations depress the sexual function.

Sticta acts upon the base of the brain as a sedative, according to Lloyd. It is indicated by occipital and infrascapular pain, associated with cough, sore chest muscles, and, perhaps rheumatism. Dose of the specific medicine, ½ to 1 drop. Waugh found no reliable data as to any trials made by regulars. It should be studied.

Staphisagria is held by Lloyd to relieve facial and cervical neuralgias and amenorrhea and dysmenorrhea when the menses are long separated and the flow is prolonged. The virtues of larkspur have not been studied except as to its principal alkaloid, delphinine. To this, Waugh has devoted nearly six pages in his book. Its action has been quite thoroughly studied, but the results have not been applied in practice. It resembles the aconitine group on one side, and cantharidin on the other. Abolition of local sensibility caused by it being more decided in the lower extremities, it should prove as valuable in sciaticas as aconitine is in facial neuralgias. Spinal irri-

tations also come under the domain of delphinine.

Solanum carolinense is urged by Manley as an antispasmodic and nerve sedative. This plant has won repute as a remedy for epilepsy. Its alkaloid, solanine, so closely parallels the bromides that it might well replace them; with the concomitant advantages of minute doses and also of less vital depression and interference with digestion. Solanine also has been studied satisfactorily. Waugh and Abbott devote more than twelve pages to it.

These are hints only. There are many other of these vegetable remedies which should be taken up and studied by members of the regular school—lobelia, for instance, a remedy esteemed of so much value by Ellingwood that he devoted practically the entire January number of his *Therapeutist* to its discussion.

Who of the great CLINIC "family" can—and will—join with us in promoting interest in American remedies? Will you? Or you?

The love of nature is a great gift, and if it is frozen or crushed out, the character can hardly fail to suffer from the loss. I will not, indeed, say that a person who does not love nature is necessarily bad; or that one who does is necessarily good; but it is to most minds a great help. Many, as Miss Cobbe says, enter the Temple through the gate called Beautiful.—John Lubbock.

TRUE AND FALSE ANGINA PECTORIS: TREATMENT

The diagnosis between the true and the false angina pectoris rests mainly upon our ability to detect structural disease of the heart or of the great mediastinal vessels in the former. But even yet we are unable always to associate the malady with any one of the lesions that may be detected—for every disease of heart or vessels may be associated with the spasm. Most frequently we find myocarditis and hyperplasia of the epithelial elements in the coats of arteries and capillaries. Interference with the nutrition of the cardiac muscular elements favors the development of spasm in them; hence, sclerosis of the coronary arteries has been found in many instances of angina. True angina occurs most frequently in men—and these belonging to the wealthier classes over fifty years of age.

False angina often occurs in women that are neurasthenic, anemic, about the change of life or even when much younger; in men or women who abuse tobacco or the caffeine-bearing beverages; in neurotics, the tuberculous, and those who have long been infected with gonorrhea or syphilis; in those affected with any other cachexia. True angina also is more liable to occur in such individuals.

The symptoms are: pain in the region of the heart, described as a sense of compression with an iron hand; anguish, fear of immediate death and evidences of collapse, among the latter, cold extremities, feeble pulse, cold sweat, voice a husky whisper, face expressing agony and deadly terror, heart action becoming slow and irregular, skin intensely pale from capillary spasm, fainting sometimes, but usually restrained by the intensity of the pain. The latter often radiates to the left arm, along the coracobrachialis.

Fortunately it is not necessary to wait for a positive differential diagnosis between the two forms of angina, for the treatment is identical and the need for relief immediate. The pathologic condition is the same—cardiac and cutaneous capillary spasm; and the indication is for the speediest and most effective vasorelaxant remedy.

This spells glonoin, in order instantaneously to relieve the condition by relaxing the affected vessels. While no other known agent so quickly relieves the spasm, the action of all nitrites is evanescent, while their power is limited, because they are so disagreeable to the patient when pushed to effect: the sensation of speedy dissolution caused by the angina is replaced by a similar one produced by the nitrite. Then, too, inasmuch as the effect of the glonoin rapidly subsides, we may have a renewal of the vascular spasm.

However, these defects can exactly be remedied by adding to the glonoin an equivalent dose of atropine or of hyoscyamine. By this means the effects of the former are increased and prolonged. Atropine itself does not act quickly enough for the present need, but the addition of glonoin hastens the manifestation of the activities of any other drug adminstered simultaneously, by opening the lumen of the vessels and allowing freer access to the parts affected, notably the nerve-centers.

That spasm always is an evidence of depression is not generally comprehended. It precedes the complete loss of control in paralysis, and in all cases shows the spastic parts to be out of the control of the will, and of the centers in the cerebrum. Setting aside the instances where active disease-processes are at work, we often, if not generally, find that strychinine aids in restoring centric

control, provided we give doses small enough, but, yet, effective.

This therapeutic principle is nowhere quite so beautifully demonstrated as in treating the anginas, where quarter-milligram doses of strychnine, when added to similar doses of glonoin and atropine, materially aid the latter in their work, increasing the reaction of the physiologic forces from these medicines and rendering relief more decided.

In all our cases of either form of angina pectoris, it is our rule to provide the patient with granules of these three remedies, to be carried in the vest pocket, ready to be taken as quickly as the evidences of an approaching paroxysm appear. One granule is to be taken every five minutes until the flushing face denotes full therapeutic activity being developed; by which time there isn't any more spasm present.

Now we have time to take up the diagnosis scientifically: to examine the heart and great vessels critically; to inquire into the history and to scan the habits; to investigate the domestic and personal sanitation; to test for infections, cachexias, dyscrasias; to separate the true from the false angina. A word of caution: It is easy enough to distinguish between typical cases; but what is there in practical, clinical medicine so rare as a typical case of anything? False anginas foreshadow the true, and shade into them. Some cases are easier to recognize and to treat than they are to name correctly.

The treatment between paroxysms is too important and too long to be considered at this time. We shall speak further of but one form, the true anginas dependent upon an incurable and increasing heart lesion.

Such was the malady that deprived the medical profession of one of its most profound thinkers, Joseph Clements. Clements studied his own malady, and we are indebted to him for several useful observations on its treatment. After the usual heart-tonics had ceased to be of avail, he found that crataegus gave decided relief and staved off the inevitable end for years. When this drug had exhausted itself, he made trials of several little-used remedies, but the last one to afford relief was digitonin. The paroxysms had become more frequent, the relief from glonoin less decided and briefer, and the malady evidently was advancing rapidly toward the end. Various other remedies had been tried and had failed to give more than brief and partial relief; when eventually digitonin was suggested. The indication was for a remedy quickly to relax vascular spasm, brief and noncumulative, without tendency seriously to depress the weakened circulation. Through its powers the last three months of Doctor Clements' life were rendered endurable, and his friends felt that the last possibility in the way of prolonging his conscious existence was secured.

Whatever may be necessitated by the existence of an infection or a cachexia, the cardinal indication here is, relaxation of the arterioles and capillaries. Thus, there is a freer opening to the nutritive current and the affected tissues are fed better. Whatever chance there may be for recovery, it is enhanced by bettering nutrition. A non-debilitating relaxant is the *sine qua non;* the whole tonic tribe is contraindicated formally.

SAFETY FACTORS OF INHALATION-ANESTHESIA

Enumerating the advances made toward rendering general anesthesia more safe, D. Kuhlenkampf, of Zwickau (*Deut. Med. Woch.*, 1914, No. 36), among the prominent factors involved lays stress, in the first place, upon the improvements effected in the automatic applicances for dosing out the volatile narcotic; these permitting a maximum of vapor concentration, independent of the operator's action, and preventing any accumulation of carbon dioxide. Then the author goes on to point out other measures and precautions.

Before all, access of free air (not oxygen) is a necessity. Next comes composure, tranquility, of the subject, which far xceeds in importance quietude of the surroundings; so much so that in case of need this restfulness should be assured by a preceding somnifacient—morphine, for xample. [Better still hyoscine-morphine!—ED.] The best and simplest inhalation method is the old sustained narcosis of Thiersch. Furthermore, the most important condition precedent to a safe issue of the anesthesia is a good appearance and unhampered breathing of the subject; under these conditions, the author asserts, c ntrol of the pulse and pupils really is superfluous, if not even undesirable. The safest and most satisfactory anesthetic is secured with the ether-chloroform vapor mixture according to the Witzel-Hoffmann or the Braun formula, using Braun's or the Roth-Draeger-Kroenig apparatus. In conclusion, th author reminds that in cases of doubt the operator now has at command local, lumbar, and venous anesthesia.

Leading Articles

More About "Twilight Sleep" in Labor

By FREDERICK LEAVITT, M. D., St. Paul, Minnesota
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ANALGESICS have been used in labor for hundreds of years. There is abundant evidence to show that it is a practice of great antiquity. The nepenthe referred to in Homer's Odyssey, the Scythian practice of inhaling the vapors of Indian hemp, the employment of mandragora, alluded to by Dioscorides and Pliny, and later used extensively as an anesthetic by Hugo de Lucca, who practiced in the 13th century, the soporific effect of mandrake mentioned in Shakespeare, all are examples of "twilight sleep."

When Sir J. Y. Simpson began the use of ether and chloroform, three generations ago, in his midwifery practice, it was not the profound narcosis of surgery that he sought to popularize, but the semiconsciousness of obstetrics. His writings excited the opposition of many, who contended that it was quite unnatural and against biblical teachings to deaden the sensibilities during childbirth. I quote a line from Meigs' "Obstetrics," published at about that time. Writing to Professor Simpson, in 1848, regarding the use of ether and chloroform, he says, "I have not yielded to several solicitations addressed to me by my patients in labor." It is now considered inhuman to withhold them during the excruciating last stages of labor.

When codeine first came into use, it, too, was thought to be a wonderful analgesic in labor. It was the common practice of many physicians to prescribe quarter- or even half-grain suppositories for maternity patients, with directions to use one as soon as labor began and to repeat every few hours. And, really, the drug has a most favorable action. Its toxicity is, probably, not much different from that of detoxicated morphine, the preparation recommended by the French gynecologist, Ribemont-Dessaigne, and so highly lauded in a recent number of *The Cosmopolitan* magazine under the caption "Motherhood Without Fear."

Referring to this sob-provoking article, is it not touching to read such lines as those following? "They talked of the new generation" (a young man and woman are pictured in each other's arms, kissing) "born without pain into a humanity which should be better and gentler—redeemed from the ancient law of suffering. It was as though a new day had dawned for the human race. Men looked into the eyes of women and were unabashed; and women looked into men's eyes and were unafraid. . . . . What war cannot destroy is the mighty discovery whereof I have written here. And the glory of generals will pale in the splendor of this conquest of patient scientists." (Vance Thompson, in the January *Cosmopolitan*.)

Mush! Who will deny the wholesome effect of war, when men can find profit in writing such puerile stuff!

A Skeptic, and a Conspiracy of Fate

Doctor De Lee, of Chicago, who was in Freiburg a little more than a year ago, says, "I went there a skeptic, and came away more skeptical." He watched ten or twelve parturients who were given the twilight sleep, but, whether it was chance or not that made them exceptionally poor examples of the advantages of scopolamine-and-morphine injections in labor, he is not prepared to say. Apparently he witnessed an unusual run of difficulties. Five of the cases were operative, in four, the forceps was required; and one called for craniotomy. In his judgment, in two of the forceps-cases, the women would have delivered themselves in due time had they not received the drugs. He believes the strength of the expulsive pains was weakened, which made instrumental interference necessary. The women were lacerated, and

one of them suffered a severe postpartum hemorrhage. One of the babies had convulsions, which continued until it left the hospital. Another patient labored thirty-six hours undelivered, when pituitrin was given because of danger to the child from delay. Then the pains became so strong that ether became necessary in order to control progress. In spite of this, the patient was badly lacerated.

In commenting upon the method, De Lee expresses the belief that there is a tendency to neglect some of the very important things in delivery, such as the condition of the birth-canal, for fear of arousing the patient. The placenta is delivered very gently, for the same reason. In three of the cases watched, he admits, the method proved ideal and that the condition of the patient after delivery was not different from that of those in his own wards at home.

The Stubborn Britisher

Speaking of the way the Freiburg methods are viewed by others, De Lee relates that Prof. T. W. Eden, of London, who was with him, had so little faith in it that he could not be induced to cross the courtyard to see it in operation. He had tried it, he said, and found it dangerous. Gauss, the chief exponent of the method, himself went to Dresden to demonstrate the morphine-scopolamine sleep in Leopold's clinic, but could not convince that astute clinician that it was safe or practicable. In Vienna, also, it was tried and, it is said, pronounced wanting.

I am much interested in the Freiburg procedures; they have appealed to me for many years. As long as seven years ago I began getting my patients out of bed on the third or fourth day, as they do over there, and never have had occasion to regret it. I have not practiced their system of artificial exercises, although I will say it looks reasonable to me. Instead of passive movements, I encourage my patients to be active and move about in bed after the first day.

I believe I was one of the first in St. Paul to try twilight sleep. Employing it a number of times and under varying circumstances, I abandoned its use because of the asphyxia it induced in the babies. Never was I so unfortunate as to lose a baby from its use, but I will say that I found it necessary to practice resuscitative measures in several instances. However, I am convinced now that too large doses were given. We expected too much from a single injection. So, for eight or ten years, off and on, I have given an occasional dose to patients whose suffering in the first stages of labor demanded some sort of anodyne. My argument was, that it should be administered long enough before the baby was born to allow the influence of the morphine to pass off.

This was twilight sleep, so far as it went; but it did not go far enough. The object is, to take away from the mother the consciousness of her suffering and the recollection of the ordeal. Some mothers will object to this and will prefer to know what is going on, bearing with fortitude the pangs of travail rather than lapse into a state of insensibility. Most of them, however, beg for relief, sooner or later.

Suggestion as a Contributive Factor

All observers are agreed, whether they endorse the giving of this combination or not, that it must not be done in a haphazard way. To instruct a nurse of little experience to give a dose of the preparation, while you go back to bed, would be worse, indeed, than useless: it is dangerous. Or, to give the drug under unfavorable circumstances, such as commotion, excitability, glare and noise, would defeat the ideal effect. Doctor De Lee speaks of the use they make in Freiburg of suggestion. There is no question about this having much to do with the success; but, then, this is not peculiar to Freiburg. We all resort to it, and in every line of our work.

When I become more proficient, I shall perhaps be able to report similar results without the use of drugs at all. If, while administering hyoscine and morphine, I say to the patient, "This drug will take away a great deal of your suffering and make the birth of your baby seem like a dream," I am sure no one will criticize me if I get the result I desire. In the giving of pituitrin, for example, I am convinced that its effect is enhanced if, before injecting it, I say that it will make the pains stronger. I have even thought I got similar results from giving of granulated sugar when accompanied by suggestion.

I mention this, to show that what may act one way under one person's direction may act differently under another's. Assurance, confidence, and a willingness to give herself fully into the hands of her accoucheur makes all the difference in the world as to the progress and outcome of a given case. Unless a physician has the trust of his patient, nothing that he does seems to have the desired effect. This may account for the uniformly good reports that I have to make about the use of hyoscine and morphine.

In looking over some of my published statements concerning the use of hyoscine and morphine in childbirth, I find that on several occasions I declared the method pernicious and advised my friends not to meddle with it. Which only goes to show that one may change his opinion. The clinical observations that I now offer were made under more favorable circumstances, and with greater care. Ten or twelve cases prove very little, but the results have been so encouraging that I see no reason why I should not recommend the method to anyone willing to give it a fair trial.

Report on Deliveries Under Hyoscine and Morphine

Case 1. Age, 26. Bipara. Sac ruptured prematurely at a little after 4 o'clock in the morning. Came to the hospital at about 6 a. m. Pains, light; regular—every three or four minutes. Taken to the delivery-room and examined at 6:45 a. m. Cervix two-thirds dilated; head engaged.

One hyoscine-morphine-cactoid tablet of half strength (the standard No. 2) was given at 6:50 a. m. The woman was told that the effect would be, to make the pains of labor bearable and that she would pass into a semi-conscious condition, and that she would not sense the pain of birth. Within fifteen or twenty minutes she apparently was asleep, but would rouse when spoken to and would make intelligent replies to questions. She obeyed promptly the directions given as to her movements. With her hands clasped across her breast, she remained throughout the rest of her labor in a quiescent state, without a single outcry or even a moan. When asked whether she suffered much pain, she replied each time that she did not. When the head was passing over the perineum, chloroform was offered, but she said she hardly thought she needed it. Apparently the progress of labor was not interfered with. The baby was born at 8:30 a. m.—one hour and 40 minutes after I gave the H-M-C. The child attempted to breathe upon the birth of its head.

No effort was made to hasten the delivery of the shoulders, which were born spontaneously after three minutes. Upon laying the baby between the mother's thighs, it was left alone, to see how quickly it would begin to breathe, the heart-beat being normal. After a few moments it gasped and within another three minutes it began to breathe regularly. Its color soon changed from a bluish tinge to pink, and by the time the cord was tied and the eyes were treated it was breathing and crying naturally. No difficulty was experienced in delivering the placenta. For two hours after delivery the patient remained in a state of semiconsciousness. She asserts that she sensed very little of what was going on and that the whole thing seems like a dream.

Case II. Age, 20. Primipara. Never was sick nor had suffered pain before. Taken in labor at 2:30 in the morning. Interpreted her pains to be owing to something she had eaten the evening before. Was not expecting to be delivered inside of a month.

I was called to see her at 5 o'clock. I saw she was in active labor, but made no examinations. I advised her going to the hospital, to which she consented. The amniotic sac ruptured soon after her arrival. One tablet of the half-strength H-M-C preparation was given hypodermically at 7 o'clock. This modified her suffering to such an extent that she remained quiet except at the height of a pain, when she made a short outcry, but fell asleep immediately afterward. She remained in bed.

The effect of the drug had partly passed off by 10 o'clock, when another tablet of the same strength was given. Within half an hour the woman was semi-conscious; would answer when spoken to; made numerous irrelevant remarks; snored. There seemed to be no abatement in force of the contractions, nor in their frequency. She vomited once during the second stage. Not that I thought it necessary, but rather as an aid, I applied the forceps when the head reached the perineum, supplementing each effort of her's with light traction on the forceps, until the parietal bosses passed beyond the ischial tuberosities. The blades then were taken off and the delivery was completed by the mother's own efforts. The baby was born at 3 p. m. Very little chloroform was given, and, though birth did not take place for five hours after the last hypodermic, she still was under its influence. The delivery of the placenta was normal.

The baby required no resuscitation, although it did not breathe for some moments after being born, and did not cry until after the cord was cut.

The following day, the mother declared that she remembered very little of what she underwent after the first injection. Before its administration, she was screaming with pain. That she was sensitive to pain and would have let us know it, I am sure. She was of the type that "hollers."

Under the influence of the drug, she could be controlled easily by suggestion. The room

was darkened and the place kept quiet. The duration of labor was about twelve hours. Within twenty minutes after its birth, the baby was crying lustily, and it showed no ill effects from the medication.

Case III. Primipara. Age, 19. Slightly short of term. Was taken with labor during the forenoon and came to the hospital in the afternoon. Breech position had been diagnosed some days before.

The first dose of hyoscine (gr. 1-200) and morphine (gr. 1-8) was given at 11 p. m. This made the woman fairly comfortable, but she did not sleep. Pains occurred every five or six minutes. A vaginal examination was not made until noon of the following day, when the cervix was found dilated to the size of a silver dollar. In the evening of that day, at 10 o'clock, a second dose, twice the strength of the first one, was given. The patient felt quite weary. She rested until 4 o'clock in the morning. The nurse reported that the uterine contractions had continued rythmically throughout the night.

At 12 o'clock noon (the third day), the cervix was found fully dilated. A third dose (full strength) of H-M-C now was given and the amnion ruptured artificially. In half an hour the woman was under the influence of the drug to the extent of forgetfulness. Labor progressed normally. The scrotum of the male child showed at the vulva at 3 o'clock, and at 4 in the afternoon it came into the world.

At no time after the first half hour was the patient conscious of what was going on. Her remarks and replies were irrelevant, at times ridiculous.

When the baby's buttocks were partly extruded, a dose of pituitrin (1 Cc.) was injected into the mother's thigh. The next pain was noticeably strengthened, and within a few minutes the baby was born. No difficulty was experienced in getting the arms. The head was delivered with the forceps, because of a little delay at the perineum, though in all probability such aid was unnecessary. The baby needed no resuscitation, breathing well after a few minutes. Two stitches were taken in the perineum, and without extra narcosis, the tablet given four hours before sufficing. The woman made no resistance when the needle passed through the skin.

Case IV. Age 28. Bipara. I had delivered her eighteen months before, and it was a long, hard labor, the recollection of which had haunted her ever since. She was exceptionally well informed on medical matters; had read most of the popular articles on twilight sleep and had formed an unfavorable opinion of it, but was willing to waive her prejudices, if I advised it.

She came to the hospital at about 1 o'clock in the afternoon. The amnion had ruptured shortly before. Labor had not yet begun, but an enema, administered shortly after she reached the hospital, helped to start it.

The first and only injection of an H-M-C tablet (the No. 2: hyoscine, gr. 1-200; morphine, gr. 1-8) was given at 3:45 p. m. Delivery took place at 5:08 p. m. The injection was made in the thigh. Consciousness was never completely lost. At the end of twenty-five minutes the woman remarked that the pains were "not half bad," cheerily saying to her husband, "Don't worry, Billy, I am going to have a nice sleep."

Labor continued normally. A little before 5 o'clock I was preparing to give another dose—half of a No. 2 tablet, or, 1-400 grain of hyoscine, 1-16 grain of morphine—when the contractions became expulsive in character, so that chloroform was given instead; the patient going completely under its influence as the head passed over the perineum. The rest of the delivery was of conventional nature. For nearly two hours afterward she remained somnolent. The following morning, when asked how she liked twilight sleep, the woman expressed herself warmly in favor of it, likening it to a pleasant dream.

The baby began to breathe as soon as it was born, but did not cry vigorously until after it had been severed from the mother for some six or eight minutes.

The following is quoted by permission from a letter this mother wrote me later:

"In looking back upon my experience of first motherhood, I confess that it was with secret dread that I anticipated my second labor. When you asked me whether I would try the 'daemmerschlaf' this time, I readily agreed. I really cannot remember much about what followed. I know there were pains, but they were not the excruciating kind that I recall suffering in my first labor. Between each pain I fell asleep, and in what seemed a very short time my baby was born, though, in reality, it was two hours. I could scarcely believe it was over. Childbirth never again will hold any terrors for me."

Case V. Bipara. Age, 22. Taken in labor at 7 o'clock in the morning. Given the No. 2 H-M-C tablet in the thigh at 8:15 a. m. In forty-five minutes, she remarked that she knew when the pains came, but they seemed "far away." Evidently they were far away.

for, when I examined the condition of the cervix some hours later, I found it undilated. By noon the drug effect had gone. At 4 p. m. real labor-pains set in.

Before administering the second dose, I investigated the state of the cervix, at 6 o'clock, and found it well dilated. A tablet of the No. 2 H. M. C. was given. After forty-five minutes, the woman was able to talk connectedly and showed no memory loss. One-half of a No. 2 tablet (third dose) then was given. Labor progressed rather rapidly and was over twenty minutes later.

The baby cried and breathed naturally. I inspected it carefully three-quarters of an hour later and found its lips were blue, otherwise it appeared normal. The mother, when aroused, talked in a disjointed way, lapsing into restful sleep again when left alone.

Case VI. Primipara. Came to the hospital early in the morning. Labor was not very active until 4 o'clock in the afternoon. The first dose of H-M-C (No. 2 tablet) was given at 9:35 o'clock in the evening; the second, at 10:05 p. m.

The first dose did not produce memory loss. The woman slept soundly between pains and even snored, but when aroused by the pain she was rational in her conversation. Five minutes after receiving the second dose, she looked at the clock and remarked that it was now twenty hours since she was taken sick. Twenty minutes after receiving the second dose she exclaimed, "O my!" then went to sleep. So far as I could judge, the force of this labor-pain was fully as great as were those before the drug was given. When the next pain came on, five minutes later, she made another outcry. Half an hour before this, I had recited those familiar lines, "The boy stood on the burning deck," etc. Twenty-five minutes after the second dose I asked her whether she remembered the name of the poem and she said it was "Jack Spratt."

Regular pains continued at intervals of five minutes. At no time were they what might be called strong, but the drug did not seem to lessen their frequency or weaken their force. At 1:30 in the night a third dose was given. When morning came, the child's head was well down on the floor of the pelvis, but moving very slowly. A dose (1 Cc.) of pituitrin was given at 7:40 a. m. and preparations made to deliver with the forceps. After waiting fifteen minutes for some evidences of increased force, the forceps was applied and the baby delivered a few minutes after 8 o'clock in the morning. A rather severe laceration of the perineum accompanied its delivery. The third stage was normal.

No resuscitative measures were required, the baby crying lustily in a few minutes. However, the baby began to fail after the second day and died of inanition two days later. I am not able to explain its death. It would not nurse, had to be fed, and "just naturally faded away."

Case VII. Age, 21. Primipara. She came to the hospital in labor at 8:45 a. m., and at 10:30 a. m. she was given a No. 2 H-M-C tablet. Up to that time she was crying bitterly because of the suffering. In less than half an hour she was quiet and moaned only at the time of a contraction, sleeping soundly between-times. At 2:45 p. m., a second (similar) tablet was given, and she continued comfortable for the remainder of the afternoon. A third dose was given at midnight, and both patient and I myself rested till 5 o'clock the next morning.

At this time, the baby's head was found low in the pelvis and the cervix fully dilated. Apparently the patient was tired out, hence, I decided to stimulate uterine contractions with pituitrin, so, at 5:45 a. m., 1 Cc. was given. In twenty minutes, this dose was repeated, but no particular influence was to be observed. Delivery was completed at 6:30 a. m. by instrumental means. There were no lacerations. The third stage was normal. The baby was born alive and gave us no anxiety. It weighed 7 pounds and 6 ounces.

Case VIII. Bipara. Age, 36. She was well in labor in the morning. When the first dose of the hyoscine-morphine-cactoid combination was given (at 10:45 a. m.) the pains were far between and weak. The sac had ruptured shortly before, and soon thereafter the contractions became more frequent and seemed stronger. This was noticed by the patient herself, and, although remaining conscious, she bore the pain without much outcry.

After an hour (11:45 a. m.), I gave half of a second No. 2 tablet, and she does not remember anything that happened from this time on, although she appeared to me to be cognizant of her surroundings. At 2 o'clock in the afternoon the baby was born. Every step of the delivery was as normal as any birth I ever attended. True, the baby was a trifle blue, but nothing was done to relieve the condition, and in two minutes it was crying as any baby should.

Half an hour after the second injection, I showed the patient an object taken from my pocket. She examined it carefully and told

me what it was—a pretty stone. An hour later I asked her whether she remembered my showing her anything, and she recalled the stone. The following day she again was shown this stone and asked whether she had seen it before or remembered hearing about it. She did not recall it.

Case IX. Mrs. V. Age, 23. Primipara. I was called to see her in the early morning. She had been in labor most of the night, but did not realize her condition. She was brought to the hospital at 8 o'clock, and given a No. 2 tablet of H-M-C at 8:45. At 11:45 a. m. the baby was born.

The child breathed and squirmed; in a few moments, however, it ceased breathing and became very blue. The ordinary stimulation by slapping was applied, but without much benefit. The cord then was ligated, the baby tubbed, its tongue retracted, and so on. After fifteen minutes the child was breathing well and since then has had no trouble. Mother and baby left the hospital at the end of a week. This is the only instance so far where it was necessary for me to use resuscitative measures. I now think that the second dose of H-M-C might well have been omitted.

[Doctor Leavitt does not tell when the second tablet was given.—Ed.]

Case X. Age, 24. Primipara. Very stout. She came to the hospital a week or ten days before labor began; when it started, she was kept awake all night by beginning labor. When I saw her in the morning, she was having pains at regular intervals of five to eight minutes. They did not seem of much account to me, but she herself thought they were about all she could stand. At 10 o'clock I gave her one of the No. 2 H-M-C tablets, which afforded great relief. During the rest of the day, she was quite comfortable and rested. At 10 o'clock in the evening, the dose was repeated, also at 2 in the night.

The night passed like a dream and she remembers very little of it. When examined at 6 the next morning, I found the cervix fully dilated. The patient still was slightly under the influence of the drug. A fourth dose (No. 2 tablet) was given at 6:15 a. m. In twenty minutes, she was oblivious to her surroundings. The force of labor did not abate a whit, and progress was physiologically normal. The baby was born at 9:15 a. m., the action of the tablet still persisting. Toward the very last a few drops of chloroform were given. No lacerations occurred.

As soon as the child was born, it began to breathe and to cry slightly. It soon became blue, but continued to breathe. Once or twice I spanked it gently, otherwise handling it the same as I generally do a newborn babe. By the time the cord was severed, it cried and gave us no further concern. The mother, although she was twenty-four hours under the influence of the morphine and hyoscine, has only the faintest recollection of the whole process of labor after the first dose.

Many more deliveries like the foregoing could be recited, but these few are typical of my more recent experiences with the H-M-C hypodermic tablet.

Some General Reflections

Therapeutic success depends largely upon the point of view and the attitude of the observer. The wish is father to the thought, and unconsciously we become influenced by our desires. Of the observations made in these few cases, I can only say that I have attempted to be honest, although I do admit that for some years my attitude toward drugging patients in labor has been against anything that might interfere with nature. This fact I had brought home to me recently with much force.

A very dear friend, who came a long distance to have me attend her in her first confinement, refused afterward to pay my fee, because, as she put it, "all I did was, to stand around and let nature do the work!" Her labor was long and tedious, and I spent hours encouraging her to bear with womanly fortitude a process that was essentially physiological. I admonished, I cheered, I held her hands, I did everything I could, except to put her to sleep and take the baby away. The case was one of the most trying I ever attended, but we got a fine baby and without harm to mother or child.

No wonder the obstetrician sometimes is tempted to "do something," when patients are unwilling to pay for a service that does not involve the application of instruments or the administration of drugs. The Good Book tells us that "they also serve who only stand and wait." The truth of this no one knows better than the obstetrician, and he knows to his sorrow that mere waiting brings a very meager reward. We, of course, should turn from all sordid motives in the practice of our profession; we should work in the best interests of our patient, regardless of remuneration; but, it stings to be told that all we do is to "sit around and let nature do the work."

In this socalled twilight sleep we have a good ally. By its use, Morpheus is invited to come and hold the expectant mother in

his arms and soothe her aching body, while we sit by and watch.

Another pleasant feature of twilight sleep observed in my experience is, that under its influence pleasant impressions prevail. The patient's personality shines forth most attractively. The women say nice things under the influence of this benign medicament. They sing their husbands' praises and pass into a beatific state that makes the atmosphere of the stork-chamber joyous, when otherwise it would be appalling. Under the effect of dreamy drugs, our advice and encouragement becomes more acceptable to her subconscious mind. If it be permissible for Doctor Crile to steal a goiter, why is it not just as proper for the obstetrician surreptitiously to steal from a mother, the while she sleeps, the child she has been bearing within her body?

In conclusion I would say that twilight sleep should not be administered at random; that the dose of hyoscine and morphine should be given cautiously and in minimum amounts; that the subjects under its influence should be closely watched by an experienced attendant; and, lastly, that all the other advantages of environment and suggestion should be employed to their full extent.

St. Paul, Minn.

Making Loose Teeth Tight*

By Edwin F. Bowers, M. D., New York City

PROGRESSIVE American physicians have found out what ails ninety-five out of every hundred of us—and of all other adults in the civilized world. We now know why our gums lack grip, why we part untimely with our natural teeth. And this discovery has led to others equally amazing and valuable in overcoming dangerous and even heretofore incurable maladies.

It is all on account of one, or possibly two, varieties of our hereditary enemies—the Germ Family—which are found luxuriating on our twenty to thirty inches of tooth surface; also between and under the teeth, or in the crypts and pockets about their roots.

These animal parasites are the cause, and the sole cause, of pyorrhea alveolaris, known also as Riggs' disease of the gums. The name of the principal miscreant is entamœba buccalis. He was first discovered by Prowazek in 1904; but he has heretofore been considered a harmless vagrant, contented to loaf around on the outside of the teeth and gums. The charge against him was merely that he existed; for the evidence showed that he was occasionally found in what were thought to be perfectly normal mouths.

But his real character was revealed last summer, when Dr. M. T. Barrett and Dr. Allen J. Smith (the last named is professor of pathology in the University of Pennsylvania) demonstrated conclusively that entamœba buccalis was the long-fingered villain that had been picking perfectly good teeth out of long-suffering gums. These findings were checked up and proved by Dr. C. C. Bass of the Tulane College of Medicine (who is to bugs what Cesare Lombroso was to human beings), Dr. F. M. Johns, and later by wide-awake pathologists and dental experts throughout the country.

Of course, to get absolutely incontrovertible proof of this discovery, we ought to inoculate a healthy person with Riggs' disease by injecting living amebas into his tissues, thereby producing what would then be the matter with him. But this savors a little too much of human vivisection, and it is hardly likely that it will be done merely to demonstrate what is already proved by the invariable presence of amebas in every case of pyorrhea examined, and by their absence in all patients who are not "Rigged."

I call this bug a "long-fingered villain" advisedly; for, in common with others of his vicious breed, he gets his living by thrusting out jelly fingers (pseudopods) from various parts of his anatomy, in his search for food, or to assist him in migrating about.

The entamœba gains an entrance beneath the red ramparts of the gums through abrasions or wounds made by toothpicks or dental floss, the healing of which is prevented by particles of food forced between the teeth. Again, the disease may enter through inflammation around the roots of the teeth, excited by ill-fitting crowns, overhanging margins of improperly constructed fillings, or through malocclusion (failure of upper and lower teeth properly to oppose one another), or through stony substances called calculi deposited from the saliva or blood serum, these being almost

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invariably found when pyorrhea is present. Extensions of the tooth enamel also press the gums, causing irritation and sponginess, which favor the breaking and entry of the invading amebas into the domicile of the tooth roots.

Once within the ramparts, the amebas may be relied upon to do the rest. They begin the attack by digging microscopic trenches and spreading infection, furnishing, in a short time, a favorable ground for reinforcements in the form of pus-producing germs, the staphylococci, and other irregulars in this perennial war.

The campaign that these Huns and Visigoths conduct carries the tissue destruction and purulence deeper and deeper, the outer coverings of the tooth roots being eventually destroyed in the siege. Finally the army reaches the tooth sockets, and attacks their bony structure. The teeth become loose, and pressure causes pus to flow from about the roots. Ultimately the suppurative process entirely destroys the attachments of the teeth. They fall out, or else become so loosened that they can be plucked out with the fingers.

Symptoms—Early and Late

The victim of this invasion usually has no knowledge of his condition until he begins to notice that the gums bleed freely on the least provocation—when brushing the teeth, for instance, or when removing impacted particles from between them. As the condition develops, the gum is stripped away from the tooth, destroying the sheath and alveolar process, the bony casing and nutrition chamber of the tooth.

Last stage of all is the shrinkage or retraction of the gums, and the final abdication of the teeth.

Dentists and physicians have wrestled with this almost universal problem of pyorrhea since the old Egyptian first penned his futile prescriptions in the Ebers Papyrus. All sorts of theories have been advanced to account for it, the most generally accepted being that it was of systemic origin—either from tuberculosis, constitutional blood disease, diabetes, Bright's, or diminished alkalinity of the blood. Still other theorists, just as vehement and every bit as sincere, held that pyorrhea was due to a neglected state of the exudates, secretions, and debris of the mouth. They insisted that there was no systemic cause for its development other than what might predispose to any disease, and that it was simply a local inflammation.

Upon the treatment, however, almost all dentists agreed. This was deliberately to ignore the sensitive nerves of the patient, and scale all the hardened deposits from his teeth, no matter how far up—or down—beneath the gum margin they may have extended. This gentle process was repeated as the calcareous or other accretions reappeared, or as often as the pyorrhea demanded it or the patient would endure it.

Six months was considered a fair time allowance for the chastened and well-scraped victim, with ordinary diligence, to accumulate another deposit. Then the scaling and the polishing with orange-wood sticks and pumice stone, and the burnishing and smoothing of tooth surfaces, would be repeated.

It must be admitted that this treatment, in conjunction with a scrupulous toilet of the mouth, has perhaps given better results than any other methods thus far elaborated. But we were told that we were incurable; that we must continue to report for a semiannual ceremony of tooth scraping and polishing so long as we had a tooth to our name.

Some extremists even hastened the day of complete toothlessness, arguing that if an infected tooth was extracted, the roots of that particular grinder would be forever cured of Riggs' disease. Which is as eminently true as that amputation of the leg will cure an ingrowing toenail, or cutting off one's head will stop hair from falling out.

All this will be changed now. The old methods will be relegated to the dust bin of the Things of Yesterday. For when Doctors Barrett and Smith found the cause of pyorrhea they also found an absolute cure for it. A specific remedy exists that is as certain in its annihilating action upon these amebas as is quinine upon those of malaria.

Emetine, the Ameba-Killer

This drug is emetine hydrochloride, an alkaloid derived from that old-fashioned remedy, ipecac—familiar friend of those departed days when not to have had croup, mumps, or whooping-cough was to invite social ostracism. Our knowledge of Lady Emetine's action as an amebacide (a killer of amebas) is based upon the work done, some years ago, in Manila, Philippine Islands, by Dr. E. B. Vedder of the United States Army. Doctor Vedder found that emetine was practically a specific for that form of dysentery which is also produced by an ameba, as like the entamœba buccalis as are two peas—when they are alike. He successfully treated hundreds of cases, and his methods have now for

some time been in use throughout the tropical world.

So when Doctors Barrett and Smith, examining a group of forty-six victims of pyorrhea, each of whom had amebas to spare in the pus pockets of his gums, looked about for something to slay these bugs with, they naturally thought of Vedder and his emetine. Various methods of administering the drug were tried; but the hypodermic finally gained the preference.

A deep injection of two cubic centimeters of a one-half percent solution of emetine hydrochloride is made into the muscle of the upper arm each day, for three successive days; alternating the arms, to prevent undue irritation or itching. Some authorities prefer to use 1-2-grain tablets of emetine, dissolved in a hypodermic syringe full of water—which gives about the same quantity of drug as the ampule of solution. [Use 1-2 grain of emetine hydrochloride for each injection, always. Ampules are advised, and Bass recommends from three to six injections on as many consecutive days.—Ed. C. M.]

This is reinforced by a similar injection every fourth to seventh day, until the gums are entirely healed, and the teeth have been tightened back into their places. In addition, it has been found that the cure is hastened if a little 1-2 percent emetine solution is forced into each gum pocket.

Results of Emetine Treatment

In many cases thus treated all pus disappeared within twenty-four hours after the first injection. In every case receiving the combined intramuscular [subcutaneous] and local injections, active signs of the disease were cleared up, the tissues took an appearance of youthful health, the teeth felt firmer—and were firmer—and the gums became harder and tighter.

The tendency to bleed stopped entirely in from twenty-four to forty-eight hours, and when only the gum tissue was involved the inflamed gums became normal in from three to ten days—or apparently just as quickly as nature could finish the repair part of the job.

In all the cases thus far treated no parasite has survived the second or third dose of this ameba poison, as proved by microscopic examination of the mouth secretions. Hundreds of pyorrhea cases have been completely cured since the announcement of the discovery last July.

For home treatment in the early stages of Riggs' disease, excellent results have followed the local application of emetine solution to the gums. This is accomplished with a movable-tip atomizer, or by placing one or two drops of a 1-2-percent solution of emetine hydrochloride, or even a few drops of fluid extract of ipecac, upon a wet brush, and forcing the solution between the teeth, at the gum margins. In several instances the amebas disappeared, bleeding stopped, and the gums resumed their normal complexion within a few days.

On account of the widespread prevalence of pyorrhea, a fact that cannot be too strongly emphasized, it might be an excellent precautionary measure to continue this prophylactic treatment indefinitely, even after a complete cure of pyorrhea has been effected—keeping a bottle of fluid extract of ipecac, an atomizer, or a vial of emetine solution, on the bathroom shelf directly alongside the tooth paste, for this purpose.

It would be well also to remember that, where there is destruction of the membrane covering the roots of the teeth, or where the gums have receded, this tissue has gone the way of all flesh. It cannot be entirely replaced by any form of treatment. With a healthy local nutrition taking the place of an active disease process and pushing it completely off the map, some slight development of gums and root covering may perhaps be expected; but even though this may not take place, be thankful that the destructive process can be arrested.

It requires no expert knowledge to give this treatment. Any capable and careful physician or dentist can make the injections. Personally, I should prefer a conscientious dentist to officiate in the slaughter of the parasites, as he would be qualified also to remove all tartar or other deposits from the teeth. This thorough cleaning and scaling should be done semiyearly, in any event.

Pyorrhea should not be confused with that condition in which there are simply tartar deposits on the teeth. In pyorrhea there is usually, but not always, tartar. The tartar is merely the result of a combination of certain secretions of the mouth with organic and mineral matters derived from the food, usually in the presence of an excess of acid. By keeping the mouth secretions more alkaline, using soda, salt, or milk of magnesia for that purpose, much of this trouble can be prevented. And what can't be prevented can be cured—by chopping it off.

Pyorrhea, however, is a distinguished member of an entirely different breed of germs. It requires specific treatment by emetine hydrochloride to banish this baneful tribe.

The cure of Riggs' disease is, interestingly enough, only one of the many medical marvels that emetine accomplishes. For instance, it has been known for some time that a complete clearing up of many cases of diabetes and other systemic conditions have followed the mechanical removal of all evidences of pyorrhea. In one case, reported by Dr. D. D. Smith of Philadelphia, a man of fifty-seven was under treatment for some time on the usual diabetic diet and other measures, with no appreciable results. Successful instrumental treatment of the pyorrhea, with no further constitutional medication, resulted, within five months, in the complete elimination of the sugar from the urine. In another case, treated at the same time, the results were equally satisfactory.

Pyorrhea May Cause Systemic Disease

If science should eventually prove that certain forms of arthritic rheumatism, gout, and the circulatory and heart complications that accompany these disorders, are due primarily to the entamœba buccalis, the discovery of this germ and its Nemesis is even more important than is Ehrlich's magnificent achievement in perfecting his specific for constitutional disease.

Quite recently several cures of Bright's disease have been reported by credible observers, resulting from the correction of pyorrhea infection; that is, the patients were cured, so far as the test tube, the microscope, and physical inspection were concerned. Albumin and waxy casts disappeared from the urine, and dropsy and all other symptoms were cleared up. It is too early to enthuse, perhaps; but it is evident that a strong note of hope is sounded for many sufferers from these troubles.

Also, in five out of seventeen cases of excised tonsils recently examined by Doctors Barrett, Smith, and William S. Middleton, the entamœbas were found occupying reserved seats, and it is thought that with increased experience in the technic of hunting for them this percentage might be materially increased. The far-reaching significance of this will appear when it is remembered that infection from the tonsils undoubtedly causes some forms of rheumatism, anemia, Bright's disease, and diabetes, and that we may now be on the trail of the cure of these diseases.

It also seems quite likely that we have discovered one more cause for that complex and sadly maltreated condition known as "stomach trouble"; for in a number of cases of Riggs' disease treated by Doctor Barrett and others there has been noted, after the assassination of the pyorrhea amebas, a complete disappearance of all symptoms of stomach and intestinal disorder. This seems to indicate that the cure of the mouth lesions had eradicated the bacteria and other poisons, the constant swallowing of which may have caused the alimentary organs to send forth their wails of distress.

So, if you have tried diet and digestives, lavage, and plain living, without quieting the gastric protests, it might be worth while to have a competent pathologist take some of the secretion round the necks of your teeth, add a little salt water to it, and put it under a low-power microscope. If the entamœba buccalis is observed splashing around, and enjoying himself as if he were at home, and intended remaining for some time, get your physician or dentist to give you a course of emetine. It seldom does any harm—unless it be to provoke a little temporary nausea, or cause a trifling local irritation—and may entirely appease the anger of a long outraged digestive tract.

Another grave condition, one cause of which undoubtedly originates in infection derived from the presence of amebas in the mouth, is uremia (an excess of urea in the blood). This occurs as a result of the constant swallowing of toxins generated by parasites, and of pus and other effete products, which are constantly and inevitably taken into the stomach because of the infective condition of the mouth.

The belief is now gaining ground that anemia may be in part due to septic conditions in the mouth. If this be true, as maintained by Dr. William Hunter and other English physicians, our old friend, the Entamœba Bug, is undoubtedly a large factor in the infective process, and may be an accessory before the fact in causing this obscure and obstinate disease.

Economic Value of Emetine

In fact, this revolutionary discovery of Barrett and Smith is so far-reaching in its scope as almost to take on the aspect of a medical miracle. Even from an economic viewpoint, measurable in increased human efficiency, it is worth millions of dollars to the world.

As illustrative of the remarkable results obtained by this treatment, a typical exhibit "A" might be limelighted. The case is one of a number treated by my brother, Dr. A. T. Bowers, of Pittsburgh. The patient, a man of wealth and culture, spent most of his time

in traveling. To his certain knowledge he had been afflicted with pyorrhea for upward of twenty years, and without his knowledge for probably as many more.

He had tried all known forms of treatment. From Hongkong to London, from Petrograd to Pittsburgh, his pilgrimages carried him, and always he had his pyorrhea in mind (perhaps I should have said the cure of his trouble, as the mind, so far as we know, isn't pestered with pyorrhea).

The old gentleman was as "nervous as a cat," and was the chagrined possessor of a breath that was indubitably not related to the perfumes of Araby the blest. Also he had that very common condition known to doctors as "malaise," but among the laity as "all in." This included the ownership of a sallow skin, a coated tongue, and a woful lack of appetite and ambition. The impatient victim had lost four or five much-prized teeth, his gums bled under the slightest provocation, or from no provocation at all, and he could, if he were so minded, shake every tooth in his head. He himself asserted, in all sincerity, that he could wag his teeth proportionately much farther than he could his head.

He received three injections of half a grain each of emetine, part of which was introduced directly into the pockets at the roots of the teeth. This was followed by one additional injection a week, for four weeks. After the second injection the bleeding stopped. The gums became progressively firmer, and now, after six weeks, so far as ocular evidence is concerned, the man is cured. The nervousness and "all in" feeling have been replaced by a grip and vigor that had been his only in pleasant dreams for many years. His digestion has improved notably, and if he were sufficiently foolish to attempt it, he probably could crack nuts with some of his remaining teeth.

But the antibleeding action of emetine on the gums fades into insignificance in comparison with its marvelous power of arresting dangerous hemorrhages from other sources. The most obstinate cases of nosebleed—cases that have resisted the action of all styptics, packing, tamponing, or local applications—have been stopped almost instantly with one injection of emetine.

Immediate results follow its use in the distressing and dangerous hemorrhages of tuberculosis and gastric ulcer, and its action in other forms of bleeding is almost instantaneous. It is thought also that the difficult and delicate operation of blood transfusion, intended to check hemorrhage in babies and others lacking coagulating power in their blood, will no longer be necessary. Instead of risking the introduction of an air bubble into the child's veins, which might stop the heart's action, or introducing particles of solid material, such as fibrin, which might lodge in the small capillaries of the brain and cause paralysis, the doctor will now need merely to inject one-half or two-thirds of a grain of emetine hydrochloride. This does the same work, in a much shorter time, and without risk.

Also it is interesting to know that the fighting armies of Europe are being supplied with these tablets to prevent or limit bleeding from wounds.

The credit for developing the antihemorrhagic uses of emetine we must share with French physicians; but as to our priority in determining the cause of pyorrhea and its resultant diseases there can be no question. It is greatly to the credit of America and American physicians that this epoch-marking discovery can be labeled "Made in America."

LET the weakest, let the humblest remember that in his daily course he can, if he will, shed around him almost a heaven. Kindly words, sympathizing attentions, watchfulness against wounding men's sensibilities—these cost very little, but they are priceless in value. Are they not the staple, almost, of our daily happiness? From hour to hour, from moment to moment, we are supported, blest, by small kindnesses.—F. W. Robertson.

An Old Doctor's Life Story

An Autobiography

By Robert Gray, M. D., Pichucalco, Mexico

EDITORIAL NOTE.—This article is the third installment of Doctor Gray's autobiography. Every physician should read this intimate record of the unfolding of an unusual life. Doctor Gray was born in the Old South, was educated in France under the old regime, fought through our Civil War on the Confederate side, and soon after its close plunged into the very depths of tropical Mexico, where he has spent the greater portion of his romantic and adventurous life. Now, at the age of eighty-five, he has given his story to the world through the pages of "Clinical Medicine."

III.

VOLUPTUOUS, gay New Orleans! How my soul saddens to revert to thee, in that far, bygone age, that on mine set the deepest seal of regret human heart ever wore.

I came to New Orleans, ere I went home, desiring to be done with the problem of studying, outside of actual practice.

In that day of high-tide Southern prosperity, New Orleans was a wonder and a show, the mart of wealth and the stage of merry festivities, with some of the flippant follies of giddy Paris. There was dissipation galore, horse-racing, gambling, drinking of good old whisky and fine champagne. There were the rendezvous of wealthy planters and their families, there was the great slave-market of the Cotton States, there was the vast Creole quarter of the Old French City, there was there a superfluity of the good, the gay, the bad.

I was invulnerable in two things: drinking (not even wine) and gaming; but less so, in another—my weak point. I met there at New Orleans several young men, scions of wealthy families, whom I had known earlier in life; young fellows something less scrupulous than they possibly would have been in their paternal neighborhoods and spending their cash contrary to pious injunctions. They told me of a female Eldorado in the élite residence quarter of the city, where private women of public respectability met properly guaranteed strangers, where an introduction was as difficult to secure as the entrance into a Masonic lodge; but that an arrangement might be made to guarantee me to the landlady of the house, the neighbors of which had no suspicion that it was not of the highest respectability. I listened, and my curiosity was perilously piqued. Yet, I remembered what my preceptors told me of such resorts in Paris, where low-class harlots met cautious strangers under the guise of being young women clandestinly absent from home for the nonce. However, I resolved to prove out and expose the fraud, in order to mortify my credulous young friends.

An elderly man whom I had never met conducted me to the house, which we reached, in a closed carriage, by entering an alley that led to a door in the rear of the house, but invisible from any street. Leaving me in a vestibule, my guide went in to confer with the mistress of the house, after which I was admitted and presented to a woman who bore not the slightest earmarks of familiarity with baudy life.

This woman told me that there was a beautiful married woman, the wife of a rich old man, who neglected her, by attending board meetings and other business engagements at night, and she wished to meet a stranger of my pedigree, but had as yet found no one she could trust and who was not a complete stranger there. She said, if I cared to make her acquaintance, the woman would see me before I saw her; and, if I struck her fancy, I should never be permitted to spend a cent upon her. I was then requested to remain seated alone a little while. In a few minutes the landlady returned and introduced the object of our conversation, then left us alone.

The woman was as exquisitely lovely in form and features as any I had ever met even in Paris. She told me much the same story of her husband as that related by the mistress of the house, affirming that he was goodness personified, never mistreating her, not even with a cross word; but that money and its attentions absorbed his life to such a degree that he rarely was in the house before midnight, always leaving immediately after the six o'clock dinner. She exculpated herself with the plea that she was young and passionate, yet had never been astray up to that moment, because she had been unable to see an acceptable stranger whom she could venture to meet without danger of exposure. But, she concluded, she felt she could safely trust to the honor of my medical education.

Subsequently, I met her twice within a week or ten days, becoming quite persuaded that she had told me the truth, at least in some measure, as she would accept no money, and the woman of the house would not take room rent. But, ye gods! the retribution of Nemesis may come slow and seemingly reluctant, but also it may be flung fierce and furiously in the midst of a delicious dream of ecstacy too wild and exquisite to last.

A dear friend of my tender years, a relative of my mother—I do not now remember how near—moved to New Orleans while I was a mere lad. This man had been instrumental in securing the influence that placed me on such solid footing with my grand preceptors in Paris. I had called on him in his office during business hours, and promised to dine with him during my stay in the city; one thing and another, however, had prevented me from joining him at the proper hour. By and by it happened that I was standing on a corner of Canal and some cross street one afternoon, when I heard my name called, and, turning, saw the carriage of my good friend edging up to the curbing.

"Get in here with me, Robert, and come along to dinner, or you will be leaving without honoring me with even that pleasure."

I stepped into the carriage, and away we rolled, drawing up at a house with granite front and marble steps, one of the most elegant residences in the city in that period.

My Friend's Wife

We entered a handsome parlor, tastefully furnished, and decorated with superb paintings. I seated myself facing a painting of Lafayette, a French character first in my estimation of all the revolutionary group. But the rustle of skirts, so familiar after the women have dressed for the six o'clock dinner in southern cities, aroused me from the reverie into which the career of Lafayette had plunged me. I arose and turned to be presented.

O ye infernal gods! Never had I felt that I wished the earth might yawn and swallow me up. There stood before me, in transcendental loveliness, my paramour of the clandestine refuge, pale and aghast, as if in the act of swooning. I recovered myself and rallied to her rescue so gallantly that she was herself in external semblance in a trice, her back being to her husband, who probably little heeded the impressions of the introduction.

Fortunately, dinner was on the table, or rather announced as ready to serve, where we were soon seated in passable composure. There my old friend led off in convenient conversation, asking me many questions about as many things, that called few expressions from the wretched wife, who was suffering the racking agony of crucifixion. I do not believe I have ever been in the presence of such suffering, although I have seen convulsive torture, wringing groans and shrieks from lips responding to the sheer delirium of writhing physical pain. But there she sat through two hours, that must have seemed an age to her, mutely stifling excruciating contortions of conscience and appalling dread that her fearful secret was about to leap forth in all its odious deformity.

I myself was by no means as comfortable as I had been at many a dinner in Paris; yet, I realized that it all depended on me to sustain her through the ordeal, wedging some short reassuring expression in the conversation to her, requiring a laconic yes or no. The husband was so absorbed by the items of information he was drawing from me that he seemed not to notice that his wife was nonplused.

At last the meal was at an end, and then my friend said: "Robert, I am now due at a meeting of directors, and shall leave you to entertain my poor wife for an hour or so. Poor soul! my obligations force me to neglect her most shamefully."

We rose and passed into the parlor, he not seating himself, but going on out of the door and down the steps.

The sound of the carriage wheels beginning to roll had no more than penetrated to the parlor, when the unhappy woman flung herself on her knees at my feet, the pathetic desolation of Niobe twitching her lovely features, pallid with the terror of despair, the wells of her heart breaking up in torrents of burning tears, her late consuming passion congealed as if by an arctic blizzard.

"O God! if these polluted lips are not too base to breathe once again Thy holy name, bear me witness that I have never unchastely sinned save with this victim at whose feet I kneel and record my desperate vow that I will nevermore thus offend. Pardon me, this once, and I will ever after be a true and faithful wife, whatever my grievance may be, notwithstanding!"

Then she turned to me. "And now, thou appreciated friend of my generous husband, whose honored name I am unworthy to bear, you have heard my supplicating appeal to heaven! I know you will be merciful and guard my horrible secret in your great southern heart. And I swear to you never to

be guilty of any dishonorable conduct again in all my life."

I promised all, over and over again, and should have pledged my life to keep that dread dishonor from the bare suspicion of her husband. Then I bade her a sad good-night and good-by, firmly convinced that a few hours of bitter contrite weeping in solitude would be the best medication she could have.

I took shady sides of streets, with my hat slouched over my face, like some guilty wretch fleeing from the scene of his crime, and thus hastened to my room, locking and bolting my door inside, resolved to see no one that night, not even making a light.

Time Can Not Erase the Soul's Scar

I no longer doubted the story of my young friends that women in a high degree respectable, in popular estimation, visited the house where I had tarnished my escutcheon with a stain the fires of purgatory could not purify in a million of years. Yea, even tonight, after these many, many long years, that ever deplorable catastrophe outweighs all the concentrated sins of all my life, and all that I might perpetrate in another score of even reckless years.

The mere thought that the wife of the bosom of my truest friend—the friend who had rendered me services beyond what had been vouchsafed me by all my countrymen besides—had been dishonored by me, a miserable, dissolute wretch, almost maddens me at this far-distant age, when most of the slips of my early years tranquily repose in the throbless bosom of Oblivion. That this woman was ardently in quest of these episodes was no mitigating circumstance to palliate my rankling remorse of ever immedicable conscience. Neither does the thought that some other, to whom the husband was unknown and would not have been considered, would have plucked from her fair brow the immaculate diadem of holy virtue, offer the slightest disculpating solace to my regretful memory of that dark and trying hour in which she knelt at my feet, imploring heaven and me to pity her goading distress. O, God! how that desolate picture of Thy most lovely handiwork flits through the weird shadows that my flickering lamp throws around me this lonely night, as if menacing me to depict the soul-rending scene in colors sufficiently startling to check unbridled lust in woman, grown indiscreet from the influence of jealousy or other foible of the overfardeled heart!

Since I am thus moved by the mere specters of shadowy memory, at this late day, behind the intervening curtain of more than half a century, what words or subtle phrases have power to tell the nameless suffering smothering me in the haunted solitude of my darkened room after I had torn myself from the pathetic scene, leaving my despairing victim writhing in the torturing throes of fiendish wretchedness? Sleep was exiled afar. At the unwonted hour of three o'clock, I arose, made a light, then dressed and packed my luggage.

At four o'clock, I paid my hotel bill, telling the night-clerk that I was too urgently called away from the city to write notes of adieu to any of my friends, and could not at this moment leave with him my address. Then I entered a carriage and was driven away, fleeing from New Orleans as if I had been warned that the sulphurous cloud of Sodom and Gomorra was about to rain the fire of destruction upon the city at sunrise, but in which I should rather have been submerged than to have remained to face my old friend and my young scapegrace friends who told me of the enchanted house—a house that else I might never have believed to be a luring reality, to this day, for it seemed to me so unnaturally impossible that wealthy members of reputable society could have plunged from elegant homes into such a whirling eddy of giddy degradation at one madly blind leap, actuated by reckless passion alone, strangers to any of that mercenary motive which sometimes leads distressed and unscrupulous women astray.

The Purity of Our Women Should Be Sacred

If there be any one thing more sacredly above and far beyond all besides in the tense life of this frail and fickle humankind of ours, it is, or should be, the queenly nobility of our women, the wives and mothers of sages and heroes, the influence of whose immaculate purity and conquerable virtue should dominate our motives and actions. That I came within the luring enchantment of the fair seductive charmer, this woman who left me the pricking sting of grieving shame and undying regret, was my own culpable indiscretion, incredulous that such a woman as I met could possibly be thus enthralled, could swerve from that high standard I have depicted.

I never had believed that there had been such voluntary female baseness, not spurred by frantic jealousy, by the insatiable yearning for else unattainable luxury, or by the maddening menace of sheer want of means to nourish otherwise perishing loved ones. But, that the reigning queen of a palatial home

whose every want was anticipated, having money to squander unquestioned by anyone, should thus descend from her pedestal, wantonly desert the sacred shrine where she was crowned and ruled in such regal majesty, only to become the paramour of an utter stranger, from whom she exacted nothing but the passing gratification of inordinate passion, I would not believe even now, had not the implacable evidence been focused beneath the startled gaze of my open eyes; and I am yet reluctant to believe that her's was more than an exceptionally rare occurrence.

I have never marveled since that humiliating experience that the angels fell under the luring enchantment of the subtle coquetry of the fair young daughters of earth while the world yet was new and warm and her humanity still immortally endowed. For, I must confess, however shamefully reluctant the truth must be wrung from my rankling bosom, that my infatuation for that wayward woman might, in a little while, have become so blindly reckless that she could have lured me to the very margin of hell, and even inside the dread portal, had she led the way into that abyss of sin.

> She was meek, and she was modest,
> She was handsome, and she was tall;
> Her hair was black, and she wore it curly;
> And, oh! those sweet dark eyes withal!

This woman's morbid passion, doubtlessly its legitimate diagnosis, was as insatiably wild and furious as that of the seamstress of my tender years, while her polished bosom and highly cultivated mind rendered her far more fascinating than the other could have been under any imaginable circumstances. And I am sure I should have sacrifiecd all there might have been of brilliant prospects in the translucent trend of futurity for me and permitted her to rush headlong into the shoreless gulf of irretrievable ruin. Happily, timely providential intervention saved us both, if not from ever pursuing remorse, then, at least, from the dire consequences that an uninterrupted pursuit of our intrigue inevitably would have entailed. Had I encountered a hospital as my coach rolled along over the shell road, while I was watching the crepuscular tints of early twilight chasing the sable gloom from the dark face of Lake Pontchartrain, I fancy I should have paused and entered, bent upon submitting to orchidectomy, so horrible was the state of my mortification.

I never saw my old friend again and never wrote him a letter. He died some two years later; and a year or so later I saw in the papers that his widow had married a very worthy man, all the fortune of my old friend having reverted to her, under his unreserved will and testament. I met her and this husband, and their children, refuging from New Orleans after the Crescent City surrendered to the federal army; and she told me that her vows and oath made in my presence were never broken, and that, unsullied in his eyes, she remained his cherished darling to his latest breath.

And here I will set down that that humiliating episode impressed me so crushingly that I remained absolutely and utterly estranged to any amorous adventures of any kind for more than ten years.

I went out among big slave-plantations and passed two months longer than my purposed time ere I had courage to face my sisters and my sweetheart, meanwhile finding a superabundance of material of disease-conditions to study among the negro population, and gaining some useful practical experience in the treatment of their diseases. This opportunity was gratefully accepted from a Parisian student, and several contiguous plantations offered me a joint salary for attending their people, such as I have never been able to attain even in the highest tide of munificent earnings; which, however, I had to decline in favor of unseen possibilities, yet, apathetically reserved for me in the storehouse of Fate.

There is subject matter for the thoughtful doctor to ponder in the rueful stage of my pilgrimage in New Orleans, for, it clearly demonstrates the formidable difficulty of preserving stable security against temptation. All the demimonde and ordinary private women of New Orleans might have exerted their wiles to lure me from rational propriety in vain; and, had I found only what I expected to meet in the house of my undoing —a public woman under the false colors of being the neglected wife of a wealthy man— the story of my wretched adventure would have been an untold investigation. Yet, the startling revelation of a woman endowed to be the queen of any thousand collected at random from the better classes of social life disarmed my defensive battlement completely, forcing me helplessly to surrender at discretion. It were vain and idle, though, for the reader to imagine that he would have escaped the ordeal unscathed. All that hapless lapse from duty has caused me to suffer of distressful regret notwithstanding, I should not venture within the radius of the spell-charm of like temptation even this night—and here

I am, with one foot in the grave, as it were, and the other on the slippery margin. Nor would ten men in a hundred of the best of you be more secure than I am this hour.

Men are men, the world over, whether in savage barbarity or the efflorescence of refined civilization. And women are their enchanting attractions, nobly honorable or however else they may recklessly elect, ere they descend beneath the dignity of well-dissembled propriety.

(*To be continued.*)

Leprosy in the Philippines

Experiences With the Disease Among the Savage Mountain Tribes

By Thomas E. Moss, M. D., Kevil, Kentucky

Formerly Surgeon in the Philippine Constabulary, and later District Health Officer in Northern Luzon

EDITORIAL NOTE.—Doctor Moss is an old friend, and this record of professional experience and hair-raising adventure will be welcomed by all our readers. It will be concluded in May, but is to be followed by other "stories" of Philippine medical life.

DURING my stay in the Philippine Islands, leprosy was one of the problems that confronted the government, the same as other affairs of state, and as district health-officer and surgeon in the Philippine constabulary—each position held three years—it was part of my duty to help in diminishing this evil by taking in charge all lepers I might discover.

When the United States took over the islands, lepers were scattered all over the archipelago, very little attempt having been made to segregate them. It costs a great deal of money to collect lepers and care for them, and it seemed that the Spanish government did not govern the islands with a view to spending money, but rather had tried to gather in as much of the country's wealth as it could.

The representatives of the United States government did not handle the leper-question as it should have been; for, besides the great expenditure of time and money, even lives are lost in fighting this disease. There were plenty of lives at the disposal of the government, but not a great deal of money. So, we had to do the best we could with the sums annually appropriated for the purpose of segregating the lepers.

Twice a year we would scour the country for people afflicted with this malady, and, whenever we found a person whom we suspected, it was my duty to send him to the nearest leper-camp, which generally was situated along the sea-coast near some port. After as many suspects as I could find had been collected, the leper-boat cast anchor a little way off the shore, and I put them all on board and then microscopically verified my diagnosis; this being done by taking a little blood from the ear and scrapings from the septum of the nose and staining the smears. If the diagnosis proved correct, the leper was taken to the leper-colony on the island of Culion in the southern part of the archipelago.

The leper-colony at Culion is the best-situated and best-cared-for place of that kind in existence, I believe: I know one could find no more picturesque place in the world. Nothing has been spared to make life, or rather what is left of life for these poor afflicted ones, as bearable as is possible. On this island has been built a large hospital where the victims are treated, sometimes even cured, it is said. Large, comfortable houses are provided, and by just glancing at them one would think the settlement a fine, prosperous city; and even on close inspection we might not recognize it as a colony of lepers; for, many persons are sent there in the first stages whom one, not familiar with the disease, would think perfectly healthy men and women, some of them showing no outward symptoms; yet, if allowed to be at large they would infect others. These slightly affected individuals are just as capable of doing things as if not afflicted; hence, the government has allowed them to have a municipality of their own, electing their town officials just as they do in other parts of the islands.

Of course, restrictions are placed upon the lepers, and those in an advanced stage are not allowed to mix indiscriminately; but otherwise they are treated like ordinary people and live out their lives far better than if left to themselves among their people, for they would be hiding and dodging and be hard pressed trying to keep from starving. Nevertheless, the Filipinos try to hide them from the officials as long as they can, for they are

fatalists and say, "We can die but once, and that will be when God sees fit to take us."

The kin of a leper, if he be a prominent person, if taken in, will bribe the guards at the concentration-camps to let him escape; when he will be comparatively free until the next crusade.

This has occurred again and again, and it was the most annoying thing with which I

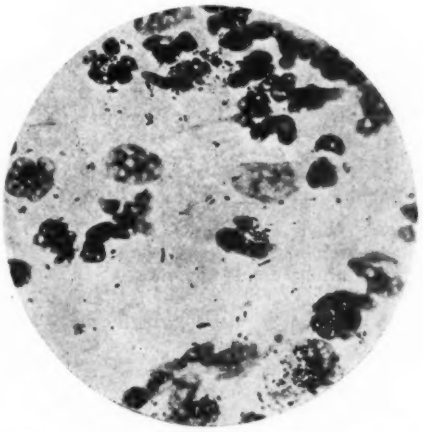

Fig 1. Enlarged microscopic field, showing bacillus leprae

had to contend. The bribe-money paid sometimes was considerable—100, 500, or even 1000 dollars. Many, many guards succumbed, and consequently many lepers escaped. I hardly could blame these people, for, if you were to see your father or wife or daughter placed in a leper-camp and know that you never would see them again, you yourself probably would give all you possessed to get them free; if only for a few months. Many a time some young girl, who looked just like any other girl to the untrained eye, would have to be sent away, for probably in a few months' time she would be a loathsome thing and would have infected many others.

Getting Acquainted With the Malady

I remember well the first time it became my duty to examine a leper—it was soon after I reached the islands. At that time I was surgeon in the Philippine constabulary, in which capacity I did not have anything to do with lepers unless they were in the service. I had never seen one and did not know anything about leprosy; so, when I received orders to go to Aparri, to examine a lieutenant at that post, I got out my books and read up on leprosy, and learned how the victim presented overhanging eyebrows, with skin covered with nodules and unsightly ulcers, different-colored spots that were anesthetic, general facial expression of the lion (whatever that may mean), and other marks.

Fortified with this book-knowledge, I boarded a river-steamer for Aparri. The lieutenant in command of the post was a half-Spanish and half-Filipino mestizo, a fine, intelligent, and, so far as inspection revealed, a very healthy man, excepting that his back showed some small brown-pinkish spots. Now, according to my book, these spots ought not to have had any feeling in them; however, when I stuck a pin into one of them the man came very near jumping out of the window. So, I pronounced this man free from leprosy. He was a leper for all that, and shortly was sent to the colony at Culion. This shows that books are not everything one needs for the diagnosis of disease.

This was the first and the last leper who ever got by me from that day until the day I left the Philippine Islands; for, soon after

Fig. 2. Earliest stage of leprosy.

I had examined this man I asked to be transferred to Manila, where I went to San Lazaro Hospital and studied the lepers at first hand and became as nearly perfect in diagnosing the disease as is possible without the aid of the microscope.

What I wanted to learn was, to be able to tell a leper at a glance. You see, a microscope would not be of very much service in the gathering in of lepers. One could not carry a microscope along in his pocket, stop a prominent man on the street and say to him: "Hold on about an hour while I get a little of your blood or scrapings from the septum of your nose; I want to make a microscopical examination to see whether you have leprosy."

If any blood were drawn in such an instance as this, I am very sure that it would not be that of the suspected leper.

In this hospital course, I learned to tell by a sort of sixth sense whether a person had

Fig. 3. A pronounced case of leprosy.

leprosy or not. Thus, the nearest infallible sign of leprosy in its incipiency in an inhabitant of the Philippine Islands is a kind of pinkish tinge of the skin, about the cheekbones and along the forehead near the roots of the hair; it looks somewhat like a slight sunburn. I do not know the cause of this, but it is the earliest sign by which leprosy can be diagnosed physically, and I never have seen the microscope fail to verify my diagnosis when I had made it upon this sunburn sign.

The Microscope in Leprosy

The discovery of the bacillus lepræ has done more to enable us to prevent the spread of this disease than has anything else. The microscopical test verifies beyond doubt the diagnosis of leprosy in its early stages, while the physical signs vary widely in individuals and the symptoms, especially in its incipiency, are almost sure to mislead anyone but an expert. Very frequently the only signs of it will be hidden by the clothing, and consist of merely a few spots of different color; for these spots are not always even of the same color. They may be found on the limbs or trunk, and the patient himself generally has paid no attention to them and does not know what they signify. I suppose this is owing to the fact that the general conception of leprosy, as learned from the Bible, is, that the name itself indicates some loathsome, horrible condition.

Leprosy always is caused by the bacillus lepræ, which is straight and rod-shaped, is a little over half as long as the diameter of a blood-corpuscle, and the ends of the rod are a little thinner than the rest of it. The bacillus stains with carbol-fuchsin after treatment with acid. It looks very much like the bacillus of tuberculosis, with which it is more often confounded than any other; not only because it resembles it, but because tuberculosis is the disease which most often mercifully terminates the life of the leper, being, one might say, grafted on to that disease.

I say "mercifully terminates," because, as the illustrations will show, these poor wretches still cling to life, with intellect sound or comparatively so, after every other sense has disappeared: taste, smell, sight, hearing, and, I might say, breathing—of course not speaking literally, for they can still get enough air through the stenosed windpipe to keep them alive. You can see this in one of the pictures: the lips and nose are gone and the eyes are nothing but empty sockets, and why this poor creature should want to live I can not fathom; but she does, and is always ready for the food when given her, although she can neither taste nor even smell it.

As said, the intellect is the last thing to disappear; and possibly this may be accounted for by the fact that rarely any bacilli are found in the brain and spinal cord, even though in other parts of the body they may appear in most amazing numbers, as, for instance, in a leproma.

I need not enter into a scientific discussion of leprosy, for one can read endless pages of that in textbooks. My aim in writing this is, to give a more or less personal experience with lepers. To begin with, I believe that the

disease is transferred from man to man through the mucous membrane of the nose and through the skin —broken or unbroken. No one knows just exactly how the bacillus gains entrance, but I think I am as nearly right as anyone. I am not afraid to take this stand, and that is more than I know of anyone else doing, for most writers give the reader his choice of the different ways in which the disease is or may be contracted. I do not think leprosy can be inherited at all, although the tendency may be, just as one may inherit the tendency to tuberculosis. I take this stand, because I have seen a leper whose family history precluded the disease entirely for generations back as far as could be traced. And in most instances it is the children who develop the disease first, the parents showing it later, or, in many cases, not at all.

Fig. 4. The Philippine leper colony at Culion.

Leprosy Amoung the Wild Tribes

In the Philippines, leprosy is not confined to any part of a given island—it can be found on the coast and upon the highest mountain. The wild tribes are affected as well as the Christians; the Christians live on the coast and the wild tribes in the mountains. If anything, the wild tribes present the worst cases. I think this is because they live more in the open and are stronger than the Christians, consequently they live longer and show the ravages of the disease in worse form than the Christians, whose life is not so long, as a rule. There are more diseases down on the coast among the Christians to end their suffering, such as cholera, which rarely gets up in the high mountains, and beriberi, which is seen more often down on the coast, where the Christians can get rice, which has been polished; whereas, up in the mountains the wild tribes raise their own rice, and when that gives out eat "camotes" (sweet potatoes).

Fig. 5. A leper policeman at the colony.

I have seen lepers in the mountains who were so badly affected that the whole surface of the skin was covered with sores, ulcers, cracks, knots, thickened rolls, nodules, and every other kind of skin affection that goes with the disease; yet, these men would be fairly strong and if not very carefully watched and guarded would escape and go back to their mountain homes. The most striking instance of this is brought to mind as I write.

I was at this time district health-officer of the Mountain Province and was stationed at the capital town, Bontoc. This town is right up in the heart of the interior, eighty miles from the coast, and a steady climb at that. I had a hospital, and was building a larger one at a cost of fifty thousand dollars. Before I went to Bontoc the wild tribes would not have much to do with medicine,

but they knew me and had every confidence in me, because while I was surgeon in the constabulary I had gone among them a great deal, as I would go from place to place where the soldiers were stationed. And once when on a trip I had operated upon a chief and saved his life. So, after I came to Bontoc to stay and equipped a small hospital, the wild tribes would bring their sick in for me to treat, or, if they had an epidemic in their towns, I would go to the place and help them get rid of it.

As a matter of fact, these people did have epidemics, one especially bad, which, for lack of a better name, I called "rice-cholera," although it was not cholera; in some instances it was worse, if anything. Thus, for instance, a person might be engaged in some kind of work and all at once would begin to void pure blood; or in the other form, would discharge a thin, slightly tinged liquid. In the former, he would be dead in an hour; in the latter, he would get well if given a little medicine. I never did find out what this disease was.

In traveling among these wild people, I kept my eyes open and located a good many lepers; so, whenever I got ready to make a shipment, I had a goodly list to choose from. I had two men from the Bontoc Igorote tribe whom I had trained in the hospital; and I had them appointed deputy marshals, so they would have power to arrest anyone in the province. These men I would take with me and go to a town and arrest a leper, or, often I simply sent the two Igorotes.

Of course, I did not send them alone, except to near-by towns; I never sent them to a town where there was danger of their being killed. If I had to get a leper out of one of the dangerous towns, I took the two natives and a squad of soldiers. I did not have to do this very often, for these savages know what the disease is, and if they know that the leper certainly will be caught they are glad to have it done. Still, they do not take sides until the leper is secured; for, if they did, and the leper got away, he probably would return and kill someone who had betrayed him. But, to return to the leper who was so badly affected.

The Escaped Giant Leper

Through my secret service, I learned of an Igorote in a town far up the gorge in the range of mountains near Bontoc. This man was reported to be a very large and fierce savage, who had built a house a half mile from the others and lived by himself, afraid to trust any of his people and very much feared by them. I had never been to this town but once and did not relish the job of capturing this fellow, but finally took my two Igorote hospital-men and two soldiers and started out over the range of mountains away from the town where he lived: I went up over the range and approached the town from the rear. It took us all night to make the trip and we just had time enough to slip up and get under the house before daylight.

We had barely taken up positions, when the leper came down the little ladder which serves in lieu of a doorstep. He suddenly found himself hedged in by two spears and two bayonets. I thought that in all probability we should have to kill him and was not taking any needless chances; but the man was so surprised and frightened that I could hardly keep him from taking me up in his arms as he begged me not to let the soldiers kill him.

He certainly was a terrible sight; he looked like a gorilla, and could have as easily picked me up as he could a child, if he could have gotten to me, but the spears kept him back. Still, he threw himself upon the ground and hugged my feet. He was covered from head to foot with every kind of leprous sore I ever saw; his skin looked like a crocodile's hide; the skin on his face and forehead hung in great folds and gave him a most ferocious look; his feet were cracked open in great seams through which the raw flesh shone. After I had gotten a good look at this monster, I did not blame the people of his town for being afraid of him and afraid to tell of his being there.

I finally made him understand that I should not let the soldiers kill him if he would come along without making any trouble. We took him to Bontoc, where I had another leper, and after letting him rest a day I started him out down to the coast in charge of four Bontoc police. It was eighty miles down to the coast where I intended establishing my leper-camp. I gave the police a letter to the lieutenant-governor, who had his headquarters in the city of Tagudin, asking him to put me up a temporary shelter on the seashore a mile out from the city. I told the police to take the leper to that spot and that three of them were to stay there while the other went to the city to see the governor, who would send out two soldiers to guard the lepers. Instead of obeying instructions, the police went to the seashore, arriving there at dusk, and put leg-irons on the lepers and left them, while they went on to the city. They soon found congenial friends and decided it would be all right to wait until morning to see the governor.

The next morning they obtained the guard of soldiers and went back out to the seashore, but found that the big leper was gone and the other one was dead. They searched the country for miles around, but could find nothing of the escaped patient; they hunted for him for three days, coming back up the trail where they expected to find him at any moment, for he had double leg-irons on and could not possibly travel very fast. There is only one trail leading up into the mountains from here, and it was not possible for him to climb the mountains any other way with leg-irons on. The only chance, as the soldiers figured it, for the leper to avoid them was, to travel slowly along and hide near the trail when he saw them coming. So, in this way, they spent five days in hunting this leper. They finally reached Bontoc and reported to me the escape. Thereupon I sent word to his town, and you can bet the people felt mighty uneasy; they sent me word, please, to find and kill him, for they knew he was making his way back to revenge himself upon them for betraying him, though they were innocent.

Twenty miles up the coast from Tagudin is a city from whence a trail leads that intersects with the Tagudin trail, forty miles up in the mountains near another town. So, I decided to go down this trail and from there back down the coast to Tagudin, and found the giant ten miles up in the mountains. He had hobbled thirty miles, moving the distance of one foot at each step, with nothing to eat, or to sustain him except his determination to get back to his home town and kill all the people he could for (as he thought) having betrayed him. The poor fellow was dead, lying with his distorted feet in the water of a little mountain-stream. The leg-irons had cut into his swollen flesh until they were buried in it.

(*To be concluded*)

Electronic Diagnosis

The Electronic Theory in the Interpretation of Disease

By George Starr White, M. D., Los Angeles, California

Director, California School of Physical Therapeutics; Fellow, American Electrotherapeutic Association

II

IT IS many years since the medical profession has shown such interest in any new discovery as it has in electronic diagnosis, first discovered by Dr. Albert Abrams of San Francisco. It is not the novelty of the method that interests the progressive physician, but the great field opened up to him. To be able to diagnose, at the very beginning, tuberculosis, carcinoma, syphilis, pus formation, and so on, and not have to rely upon doubtful laboratory methods, is almost beyond comprehension or belief.

In teaching the system of electronic diagnosis, we have found that percussion is an art not well understood by the average doctor. The percussing out of the heart, liver, spleen, and so on, can be done well, but when it comes to percussing out areas of different tensions many are hopelessly at sea.

Before being competent to diagnose a diseased condition by the electronic method, one should practice until certain changes in visceral tension (called by Abrams "visceral reflexes") can be positively determined. "Nothing of value is gained without effort" applies to becoming proficient in percussing as much as in any other medical work.

One must be exact in every detail. A change in the position or tension of the hand that is next to the subject being percussed will change the note. The stroke must be uniform for any special observations.

In our first paper on this subject, which appeared in the November issue of Clinical Medicine, we illustrated and described a plexor and pleximeter that could be employed by those who could not use the "finger-finger" method. For some of our most recent discoveries in this work, those instruments are not as good as another device we are about to describe.

In the fifth edition of Dr. Albert Abrams' work, "Spondylotherapy," he mentions the fact that the pleximeter-finger *must* be very rigid and the distal phalanx bent dorsally. In Figure 1, is shown the hand in an easily extended position. In Figure 2, the same hand is shown "flexed dorsally" or "hyperextended."

To do this new work, one must practice forced extension of the fingers of the plexime-

ter-hand—generally the left hand. After a few weeks' diligent practice, one will be surprised to see how much power can be cultivated and how far the fingers can be bent backward. At first the hand will become very tired, but after a few weeks the hand can be kept in this position of forced extension for an hour at a time without any inconvenience.

Fig. 1. Showing the positions of the hand prior to percussion.

Figure 2 shows a thimble on the second, or plexímeter-finger of the left hand, and one on the first, or plexor-finger of the right hand. Most colleges teach the use of the second finger of the right hand for plexor; but, for reasons given below, we advise the use of the index-finger.

The Thimbles

We have observed that the best percussors have the plexímeter-finger calloused between the middle and the distal joints, and also the end of the plexor-finger is calloused and very hard. As we do not all have fingers alike, and to facilitate the acquiring of a uniform stroke, we tried all sorts of material for finger-ends and for finger-shields. We finally tried celluloid or bone thimbles, but the adventitious sound of the hollow space between the finger-end and the thimble bothered us. We tried filling the end with wax, but that did not answer.

We then discovered that a weight in the thimble aided in the stroke and sound. We melted beeswax and filled the thimbles half full and filled this wax with birdseed-shot. As the wax cooled, we put the thimble on the finger on which it was to go, so that it was fitted to the finger while the wax was cooling. We use the largest white celluloid thimble we can find. The weighted thimble on the plexímeter-finger aids in giving resistance to the finger and in keeping the end bent away from the body being percussed.

The loaded thimble on the plexor-finger makes the end unyielding and helps in bringing out a sound that is easily recognized in careful, differentiating work.

How We Percuss

We use the index-finger for the plexor-finger, because all have more control over that than over the other one, and also because a finger movement only often is sufficient to elicit the delicate sounds that we want brought out. A wrist movement can be used when needed; but, for delicate work, the finger movement and staccato touch of "feather weight" is all that is required.

Figure 3 shows how we hold the hands in percussing. The plexímeter-finger should be *horizontal* and touch the body of the subject so lightly that it can be moved about without any friction on the skin, yet feel the talcum powder we dust over the abdomen.

At first the plexímeter-finger will be very sore and a day's rest will be required, but after a few days it will be calloused in the space between the middle and distal knuckles, and percussing for several hours will not affect it.

How to Proceed

The work should be done in a room with subdued light. Sunlight or electric light, if shining upon the subject or if too near, will change the reflex. There should be no bright colors in the room and no colored shades or curtains to alter the white light in which we must work. Highly colored clothing must be removed and not be near the subject. White or black clothing is the best to have near the operator or subject.

Fig. 2. The over-extended hand and plexímeter finger ready for percussion.

The subject must stand erect and the abdomen must be bare from just below the breasts to midway between the pubes and umbilicus. The room must not be cold enough to chill the body. Some like to wear a jacket, but that depends upon the conditions.

Grounding the Subject

Figure 4, as well as some of the other photographs, shows two pieces of aluminum 12 inches square. One of them is grounded by a chain to a water-pipe or gas-pipe, and the other is attached to the grounded piece by a chain long enough to allow the *patient* to stand on it and not touch the subject percussed. Some think the floor is ground enough, but for some of the delicate work mentioned below the grounded metal is necessary. For all this work we advise the grounding of both subject and patient.

The Magnets

Figure 5 shows an 8-inch "horseshoe" magnet in a mortised block, and two heavy bar magnets in a block which is bored out and has a piece of steel set into its bottom. In this way, the bar magnets are bonded at the bottom of the block. When they are placed into the block, opposite poles down, they form a "horseshoe" magnet. The upper ends of the bonded bar magnets have a brass wire bale attached by means of adhesive plaster. By yoking the upper ends of the bar magnets, and also bonding the ends of the "horseshoe" magnet with a piece of iron, their strength is preserved and they do not exert much magnetic influence in the air about them. Note that the brass bales on the bar magnets are on opposite poles, namely, one bar has the bale on the N pole and the other has it on the S pole.

Fig. 3. Showing how hands are held when percussing.

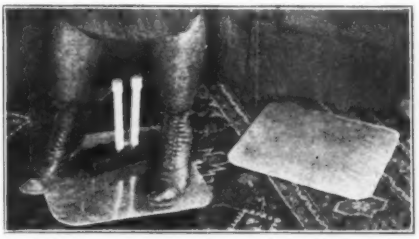

Fig. 4. Patient stands on "grounded" aluminum plates.

Any magnetic bar used should be standardized by finding how near it must approach a compass needle to deflect it. A magnet causing deflection at 6 inches is better for this work than one causing a deflection at 6 feet.

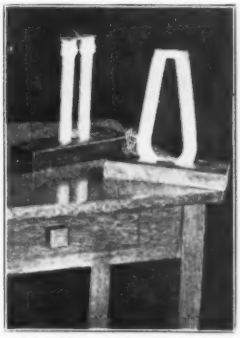

Fig. 5. The magnets used in this work.

The distance so found is about the distance it should be from the subject.

Always try the magnet to see which is N and which is S. Do this by means of the

compass needle. This is very important as some bar magnets are wrongly marked.

The Magnetic Meridian

We have recently discovered that the tension of the viscera is greater when the body faces due north or south than when

Fig. 6. Patient in position on metal plate. Bar magnet on table.

facing east or west. The first dull or "near-dull" place we find, when percussing the abdomen for the stomach-reflex, we call the "working-line." The subject must stand facing east or west when getting the normal "working-line."

Within from one-half minute to three minutes after a person turns due north or south from due east or west, the tension of the viscera is changed. Below we explain how we prove this marvelous phenomenon.

How to Obtain the "Working-Line"

Our first paper on this subject briefly explained that we followed the method of Doctor Abrams in obtaining our "working-lines," but to make this paper more complete we shall repeat some of the instructions given.

Figure 3 shows the subject, standing on grounded aluminum, facing east or west. With the left, or plexímeter-hand just touching the talcum-dusted abdomen, we begin well below the umbilicus on the right side. (Be sure that the plexímeter-finger is horizontal.) The loaded, celluloid thimble is on the plexímeter-finger as well as on the plexor-finger.

By tapping with a "feather stroke," we lightly percuss the plexímeter-finger with the plexor-finger. We slowly move the left hand up on the abdomen, tapping evenly as we proceed. Somewhere within from 1 to 2 inches above or below the navel we shall note a "near-dull" note. Repeat the procedure quickly and, if sure of the sound, mark the abdomen at the *under* side of the plexímeter-

Fig. 7. Position for visceral reflex.

finger with a dermatograph. This is our "working-line" on the right side of the subject.

We proceed in the same manner on the left side. The "working-line" on the left side may or may not be parallel with that on the right side. This "working-line" indicates the "near-dull" sound obtained at the lower

Fig. 8. Another position for visceral reflex.

border of the liver. We rarely find it in the same location, with regard to the umbilicus, on two different subjects, and it changes very often in the same subject. We always find our "working-line" for each test, no matter whether the subject has been "marked" only a few minutes previously.

How to Elicit the Visceral Reflex

The N–S and E–W (north–south and east–west) lines should be accurately marked out on the working-room floor; or, cords may be drawn across the ceiling, to indicate the points of the compass. The "working-lines" are obtained while the subject stands facing due east or west. Have the subject turn due north or south, then, after about half a minute, proceed as in obtaining the "working-lines."

Begin on the right side. The "near-dull" note will now be found about a finger's breadth *below* the "working-line" on the right side, and from one-finger's to three-fingers' breadth below on the left side. Mark these positions with the dermatograph. Now let the subject face east or west again and after a half a minute or so percuss. The "near-dull" position will have returned to the original, or "working-line." This proves that the magnetic meridian exerts a very pronounced influence on the animal economy.

The Use of Magnets

Test each bar magnet with a compass to see if "N" means north or south. They are not all marked alike. The north or positive pole of the bar magnet repels the north seeking pole of the needle, but attracts the south seeking pole.

Figure 5 shows how magnets, when not in use, should be kept in the room where the tests are made. Having proved that the human organism is influenced even by the magnetic meridian, it illustrates how a magnet in a room may change the reactions in electronic diagnosis. When employing one bar magnet in this work, the other should be kept in an upright position at least three feet distant from the subject percussed.

The blocks shown in Figure 5 are 1 1-2 inches thick, 2 1-2 inches wide, and 8 inches long. A piece of iron 1-4 inch thick is mortised into the bottom of the block containing the bar magnets, and they rest on it—*opposite poles down.*

Fig. 9. Change in dull point of liver elicited in this position.

Fig. 10. Another experiment for eliciting reflexes.

The N pole of the bar magnet gives off *positive* energy, and the S pole gives off *negative* energy. When the N and S poles point in the same direction (as shown in Figure 5) and the yoke or band is removed, neutral, or isoelectric energy is given off.

With the subject standing on the grounded aluminum as before, but facing due east or west, place or hold a bar or horseshoe magnet at right angles to the abdomen and on a level with the umbilicus, as shown by the stand in Figure 6. Proceed as when the subject was standing due north and south. The "near-dull" region will coincide with the lower mark on the abdomen, or it will be a little lower, depending upon the strength of the magnet used.

With the face east or west and neutral energy from the magnets (opposite poles up) between the feet of the subject, as shown in Figure 4, the stomach and liver reflex (dulness elicited lower down on abdomen) is obtained.

If the subject face north or south, with the magnets between his feet (neutral energy), there is no visceral reflex (dulness of stomach not elicited).

If the subject face north and the S pole of the bar magnet be directed (south) to the forehead, as shown in Figure 7, the visceral reflex is obtained; but, if the N pole be directed south (to the forehead), no reflex is elicited.

With the subject facing south and the N pole of the magnet pointing west, as shown in Figure 8, or, with the magnet lower down toward the abdomen, there is visceral dulness; but, if the S pole be employed, there is no reflex.

If the horseshoe magnet (neutral energy) be suspended over the spinal column of the subject (Figure 9), who may face in any direction, the liver and stomach "near-dull" line is *raised* about a finger's breadth *above* the "working-line." If the face be north or south and one of the bar magnets be used instead of the horseshoe magnet, with either pole pointing over the spinal column, there is "elevated dulness." If the subject face east or west and either the N or S pole of the magnet point directly over the spinal column, the visceral reflex is obtained.

If the subject face north or south, with either pole of the magnet directed over the

Fig. 11 Showing how positive energy is given off from hands.

spine and either pole directed east or west, as shown in Figure 10, no visceral reflex is obtained.

If the subject face east or west, with either the north or the south pole of the magnet directed over the spine and the S pole of

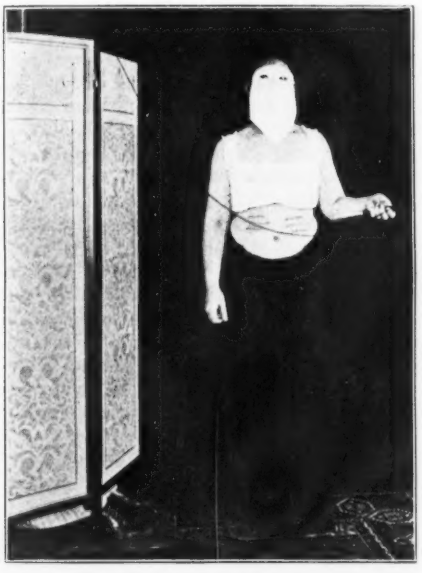

Fig. 12. Another person is behind the screen.

another magnet, as shown in Figure 6, there is no reflex; but, if the N pole be substituted, there is a visceral reflex.

These and many more reactions with the magnets we have worked out on a healthy female subject. If a diseased condition exist, we observe that a definite magnetic reaction obtains. Dr. Albert Abrams' work on "Human Energy" enumerates many diagnostic points, and we, who are using these methods, are daily discovering new facts to simplify and strengthen the work.

Human Energy to Produce the Reflexes

Figure 11 shows how the visceral reflex may be obtained by a second subject pointing at the subject percussed. As before stated, both subjects must be grounded. Either the right hand of a normal female or the left hand of a normal male will elicit the reflex. We have found that aluminum thimbles on the fingers strengthen the reflex.

If the subject in Figure 11 be facing due north or south and the right hand of a female or the left hand of a male be pointed as illustrated, a reflex is obtained. The energy from the N pole (positive end) of a bar magnet will have the same effect. This proves that the energy given off from the hands above named is positive energy. The same can be proved by the use of the bar magnets, since opposite poles equalize the energy and like poles augment the energy. (This was explained in our first paper in the November issue of CLINICAL MEDICINE.)

Figure 12 shows how a patient can be placed behind a screen and an assistant place one end of a conductor on the part to be diagnosed and the subject hold the other conductor-end in relation to the stomach. Note how patient and subject are grounded. The

Fig. 13. Patient is used as the subject

patient may sit, but the subject being percussed must stand.

Figure 13 illustrates how a patient may be used as the subject. She is shown holding a magnifying energy-conductor to a supposed beginning tuberculous lesion. The other conductor-end is held on a specially arranged

stand, which also holds a bar magnet to be used in working out the polarity of the energy given off. In the former article on this subject, the energy-conductors are illustrated and the manner of their use is described.

The Influence of Colors

In our first paper on Electronic Diagnosis, we mentioned the use of yellow and blue in differentiating between tuberculosis and syphilis.

That colors play a very important role in the physical world, no one disputes, but it was only of late that we had a way to prove easily that colors play an important part in the human economy. We will not go into this subject of color, except so far as it pertains to our subject, Electronic Diagnosis.

We think Dr. Albert Abrams was the first one to utilize colored screens in diagnosing disease. From the impetus given by his teaching, we have tried to go farther, and the following are some of our most recent observations. We hope others will go on with this great work and reveal to the profession all the facts possible relating to diagnosis and therapeutics along the lines laid down in these papers.

Yellow, as well as photographers' "safety-color," seems to have an entirely different effect upon the emanation of human energy than do blue or the colors of shorter wave-lengths.

We mentioned above that the right hand of a normal female and the left hand of a normal male would produce the visceral reflex under certain conditions. Now we find that the "polarity" of the male and the female is reversed for an hour or more if either drink a yellow liquid, such as tea, saffron-water, orange-juice, and the like. If one ingest a red or blue substance, such as red beets or a blue coloring matter, immediately after ingesting the yellow substance, no change in polarity is observed.

Since having discovered the effects of the magnetic meridian upon the reflexes, we have tested a limited number of persons suffering from tuberculosis and syphilis, and find that, if they stand facing due north or south, no visceral reflex is obtained. In these cases, we find that, if the disease be tuberculous, a yellow or a "safety" colored light shed on the bare abdomen will produce the reflex, and a blue light will not. If the case be one of syphilis, a blue light shed in the same way produces the reflex, while the yellow light will not. This discovery is too recent to be made the subject of a complete report now, but we mention it in order to aid others in working out diagnostic data.

In his book, "Spondylotherapy," fifth edition, Dr. Albert Abrams mentions that the sex of an unborn child can be determined by the "polarity" of the mother. This we have found to be true, but we have also discovered that, if the mother ingest any yellow substance, the polarity is changed for an hour or so. In testing polarity of persons, make sure that they have not eaten or drank anything for at least five hours prior to the examination.

Reasoning from the old writings of some observers of colors, we concluded that "colored-sunlight-water" should change the reflex. We put some distilled water in an amber bottle and let it stand in the sunlight for a whole day. We then let some men and women drink a little of this "ambereau." Within three minutes the "polarity" of each person was changed, and it remained changed from one-half hour to two hours.

This shows what an incalculably sensitive method we have at our command for diagnosing disease and observing changes in the "human energy."

The "visceral reflex of Abrams" is an epoch-making discovery in medicine, and we urge all those who can to perfect themselves in this work and thus simplify diagnosis. Eventually we hope to find new methods along these lines for curing diseases.

THERE shall never be one lost good; what was shall be as before,
The evil is naught, is nil, is silence implying sound;
What was good shall be good, with for evil so much good more,
On earth the broken arc, in Heaven the perfect round.

—Robert Browning.

Drug Habits and How to Treat Them

By William F. Waugh, A. M., M. D., Chicago, Illinois

EDITORIAL NOTE.—In view of the passage of the Federal Antinarcotic Law, it is of the utmost importance that every physician should know how to handle the addicts coming to him for treatment. Doctor Waugh has had large experience with cases of this character and gives advice which should be eagerly read by every practitioner.

THE Harrison narcotic law, with the supplementary statutes to be enacted by the states and municipalities, will render it difficult for habitues to secure supplies of their drugs. This must impel an increasing number to resort to our profession for cure. Many will resort to quacks and be skinned; for it is the nature of man to be credulous, and to trust the fellow who makes the biggest promises. For that reason the party who claims to cure the victim without suffering will get the bulk of the business.

The ideal of the drug habitue is to be put to sleep, and awake some time later, cured. That this can not be realized, and that the approximation to this ideal carries with it certain peril to life and reason, does not weigh much—the addict is not afraid of drugs and is willing to take chances with them that a sane man would not—and that an honest man would not take with a patient.

There are very great advantages in treating such patients at a sanatorium, but institutional treatment is not absolutely essential. Any average doctor *can* cure these people at his own home, and sometimes in the patient's home, although the cure can never be guaranteed, and should not be attempted except under certain conditions. These are:

Conditions Which Must be Insisted Upon

1. The patient must surrender all his drugs to the doctor, and have no possible means of securing more except through the doctor. If the latter, through weakness or carelessness, does not enforce this rule, he will surely fail.

2. Trusty attendants must be provided, who will not leave the patient out of sight a moment while he is passing through the trying period.

3. The patient must agree, legally, to submit absolutely to the doctor for the period specified as requisite for the cure; for there is a time when the patient's judgment must not be the ruler of what is to be done. If the doctor has not the sand to enforce this, he should send the patient to one who has it.

4. The compensation should be fixed and paid in advance; and no part be returnable in case the treatment is interrupted or stopped without the consent of the physician. It is too much to let the patient feel that a failure will save him money. On the contrary he should feel that he has paid so heavily that he must be cured to get the worth of his money. Much experience has led to my insistence on this rule. Never trust a drug habitue. The one who asks for credit often intends to cheat you. In a quarter of century of treating these cases, I have never trusted one who did not swindle me, and then defame me to excuse his rascality.

Begin by a careful examination of the patient to see if he ought to be cured. If a victim of incurable cancer, let him alone. With tuberculosis, diabetes, and other affections of similar gravity, the individual circumstances must govern. Here is a type: A man had his thigh amputated, and suffers neuritic pains in the nerve-ends whenever he is free from morphine. The tumors should be excised and then the drug stopped. Until the operation is done, can anybody tell whether the man is entitled to his drug or not? We have no esthesiometer.

The state of the heart, kidneys and other organs must be ascertained first. Be careful about treating a nephritic—he may die if you are not careful.

Beginning Treatment

Install your nurse and put the patient to bed. Begin treatment by purging, and keep purging until the invariably loaded bowels are emptied. There is no better way than to give calomel and podophyllotoxin, 1-6 grain each every half hour for seven doses, then full doses of a laxative saline, the clean-out process being aided by colonic flushing with a warm saline solution. The purging must continue until the liver lets go its accumulations, and bile pours down and up by the gallon. Then the worst is over, and in twenty-four hours more the patient will begin to eat.

When the time comes for the dose of "dope," give half the usual quantity, and half the dose each time afterwards. In two days all opiates should be stopped, but after twenty-four hours' abstinence, a small dose,

usually a quarter-grain, should be given, and that ends it.

Don't bother with substitutes—they don't substitute worth a cent. Just quit and be done with it. The patient will suffer merry-well—and so he should. There will be two days of torment, and then comes peace. The suffering may be lessened by several expedients. One is hot water. Put the man in a full bath-tub, and keep up the heat as high as he can bear it, leaving him there for hours, if he finds it comfortable. It aids elimination and puts in time.

Excessive suffering is mostly imaginary. Real pain is due to inefficient elimination. The theory is that the morphine itself is stored in the cells somewhere, and its use has developed an antitoxin, which keeps developing after the inhibiting drug has been discontinued. To this antitoxin the suffering is due. It is not exactly pain—patients say a real pain would be a relief. Much of it is autosuggestion — unmercifully strong with these men. The autotoxemia is real.

Drugs Which Give Relief During Withdrawal Stage

I have studied such drugs in many cases, and rarely see identical manifestations in two. I study the pulse and the pupils, and give what will restore these to normal—and it always relieves the suffering. If the pulse is feeble I give strychnine or physostigmine; if strong and full I use gelseminine; if the pupil is contracted I give atropine or hyoscine; if dilated, I know that the patient will not be able to distinguish between the effects of physostigmine and real morphine. In fact, this was so perfect a substitution in one case that the woman refused to believe she had not had morphine, and made this an excuse for not paying her bill. In other cases I have found indications for pilocarpine, solanine, quinine, sparteine, and once picrotoxin. But of all these, gelseminine covers most cases and most closely replaces morphine.

If the patient has not sand enough to bear the salutary suffering, and insists on being doped through the withdrawal period, better let the other man have him. But if you must do this, you may ease him by stupefying with chloral, sodium bromide or hyoscine. All require very careful watching. The stupefaction of bromides increases and reaches its acme about thirty-six hours after the last dose, so that you are very apt to give too much and face a peril of life. The safest of the three is the one you are most accustomed to use.

By using H-M-C you can cut the morphine faster, as a quarter-grain of morphine in this tablet gives more relief than a grain of morphine alone. To this you may add hyoscine alone, and this is safer by far than chloral or bromides. Don't give of either more than just enough to enable you to control your patient; let this be the object rather than inducing stupefaction. He may lament over suffering, but when he is over it, he will have lost all memory of suffering.

Feed regularly when the patient can retain food, using only liquids, and these hot if he can take them. Malted milk, turtle soup, clam juice, raw eggwhite in milk or water, fresh fruit juices, coffee, and anything else the patient may crave. Give about a teacupful every two hours. If he vomits, give a little anyhow.

A hot head and bright eye call for gelseminine. Of any medicine note the effects closely and do not overdose. A morphine habitue may take a scruple a day of that drug, and be poisoned by a full dose of another drug—the toleration is only for the habit drug.

Don't allow any alcohol at all.

When the patient has been without morphine two days and nights, and time for reaction arrives, aid it by a cold plunge into the tub, followed by brisk slapping and rubbing, and cover up warmly in bed. He will tell you soon that he feels as if he had had a big slug of dope; and you will not have to coax him into the tub after that—he will want and may take one every hour.

Care During Convalescence

The whole course may take a week; after which the patient is a convalescent and needs the care given to one. He will be feeble and hungry; and for a year after that, will shrink from all unpleasantness and want his drug. He should not return to his duties for a year, if such a rest is economically possible, and this vacation should be spent in the country. Then there should be no relapse. All the relapses come from returning to work too soon. The man feels so well, so hearty, so rejuvenated, that he wants to go home and make up for lost time and expenses—and the moment he faces the trials of active life without his dope he collapses. He is also very prone to autotoxemia, and his bowels require constant watching. The results of retention are disastrous to him.

Let him go on a ranch and let his mind vegetate and recuperate. Let his physiology and psychology have time to learn to work

without the stimulus of drugs, and let the vital forces flow into the proper channels. Then the cure will be permanent. But—to take a man who has for years had every nerve, every physiologic function, attuned to the morphine key, and expect him to be restored to normal function in a month—preposterous!

Think of the loftiest intellect, the strongest human will, you can—of Napoleon, Roosevelt, Grant, the Kaiser—and could any of them stop the use of morphine after years of habituation, stop it unaided? No; a thousand times, no!

The above applies to all forms of opiate habit—opium, heroin, codeine.

Cocaine? Cocaine destroys the soul, leaves the victim without the moral sense. No confirmed cocainist wants to be cured, or will be, if he can help it. Whether he can be cured unless by killing him, I am doubtful. In fact, that seems about the best way to treat him.

Chloroform? Two cases of confirmed habit are on my records. One is dead; the other was cured, but the detail of this case is buried as in the confessional.

The treatment of drug habitues is one of the most difficult, most exhausting, and yet most fascinating, departments of medical practice.

[Doctor Waugh has devoted years to the study of the drug habits and has treated many cases of narcotic habituation. There are few men (if any) who know this subject better; therefore, if you have some "tough" cases of this kind to treat, I suggest you write him for advice.—ED.]

Pathology and Treatment of Goiter

A Resume of the Recent Literature

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GOITER—or "struma," as it was formerly called—is defined by Dock as, in general, any morbid enlargement of the thyroid gland, although the name applies more strictly to a "chronic enlargement of the thyroid gland, of unknown cause, with variable anatomical features, occurring as an endemic, epidemic or sporadic disease." Small goiters may be caused by a strain (confinement), by injury, an infectious disease, or an inflammatory or neoplastic alteration.

Ordinary goiters are generally from two to four or five times the size of the normal thyroid gland, although they may grow to an enormous size, hanging down even to the thighs. Among the symptoms of simple goiter are the following: an upward movement of the growth when swallowing; slight pressure on different adjacent organs, causing a cough or a dangerous occlusion of the trachea; hemicrania (pain on one side of the head); nervousness; emaciation; and, according to some writers, a rapid action of the heart, with palpitation, may result from the mechanical irritation of the goiter on the nerves of the heart.

Pathology

Recent writings of medical authorities on the subject of goiter tend to show that a simple goiter may develop into an exophthalmic one; in fact, there is great danger of such an occurrence. Further, Dr. L. B. Wilson says that either of the two principal types of simple goiter—the diffuse, or parenchymatous, and the nodular, or encapsulated—may become cystic or cancerous. In his article he says:

"In considering the relationship of the pathology of exophthalmic and simple goiter, we are apt to be blinded by our old teachings that the two are always distinct entities. Though this has been disproven clinically over and over again, we find every once in a while some one writing learnedly of either the diagnosis or the pathology of the two diseases, as though they never in the same individual changed from one to the other. As a matter of fact, close inquiry will, in a very large percentage of cases of simple goiter, reveal symptoms which are unmistakably those of exophthalmic goiter, and, conversely, *if the patient lives long enough*, every case of exophthalmic goiter is hypothetically destined, in the order of pathologic degeneration, to become a case of simple goiter.

"In examining cases of so-called simple goiter, for exophthalmic symptoms, we must get completely away from our old teachings that exophthalmos is a *sine qua non* of Graves's

disease. The disturbed nervous, metabolic, and muscular phenomena are quite essentially diagnostic. Looked at from the clinical standpoint, then, a case of Graves's disease is one with an enlarged thyroid gland and exhibiting symptoms of too much absorbed secretion, while a case of simple goiter is one with an enlarged thyroid gland, but exhibiting no such symptoms." (See the June 1909, number of *Surgery, Gynecology, and Obstetrics*, containing Dr. Wilson's article, for other articles on the subject of goiter.)

O. S. Hillman, in a recent paper on "The Pathology of Exophthalmic Goiter," says:

"In recent years, the clinical evidence, especially that derived from surgical treatment, tends to support the thyrotoxicosis hypothesis, while at the same time the evidence deduced from pathologic anatomy, chemistry, and pathologic physiology rather suggests that the thyroid gland does not play a primary role in the production of the clinical manifestations. In fact, some authorities believe that the thyroid gland is only secondarily involved, and that there is some primary determining factor, either of a chemical or a nervous nature, at work.

"The consensus of opinion is in favor of excessive secretion of the gland as causing the typical signs of the disease—tachycardia, exophthalmos, enlargement of the thyroid gland, tremor and nervousness. This opinion is substantiated by: (1) The cure of the symptoms after partial thyroidectomy, and (2) the production of some of the most striking symptoms by the administration of too large doses of thyroid extract to previously healthy men or animals. But the question naturally arises, What is behind these conditions? This is difficult to answer, as the true nature of the alteration in the internal secretion of the gland is largely a matter of conjecture."

Further, the same writer says:

"From the standpoint of gross pathology, the gland is usually larger than normal; but, as stated above, it may be practically of average normal size, or even smaller than normal. Vascularity is marked, and this is frequently a source of danger during an operation, as the vessels coursing over the surface of the glands are usually very large. A noticeable feature is the cut surface of the gland, which is drier and less viscid than normal. The important changes are, increase of parenchyma and stroma, with diminution or almost complete disappearance of the colloid and alteration in its quality."

L. B. Wilson of the Mayo clinic, writing in February, 1914, on the pathology of the thyroid gland in toxic, nonexophthalmic goiter, gives the following general summary of results from investigations of several hundred cases:

"1. The pathology of the thyroid in true exophthalmic goiter is essentially a primary parenchymatous hypertrophy and hyperplasia, i.e., an increased amount of functionating parenchyma associated with an increased absorption. The process is an acute one.

"2. The pathology of a toxic simple goiter is marked, essentially, by atrophic parenchyma, decreased function, and decreased absorption. The process is a chronic one.

"3. The pathology of toxic-nonexophthalmic goiter of clinical group 2 (i.e., those resembling exophthalmic goiter) is one of increased parenchyma through generative processes in atrophic parenchyma or the formation of parenchyma of the fetal type, with an increase in each instance of secretory activity and of absorption. The process is a chronic one, but sufficiently active to cause the patient to consult a surgeon earlier than do those cases in clinical group 1. (Cardiovascular variety.)

"4. The nearer the cases of clinical group 2 (toxic-nonexophthalmics) approach, in age and symptoms, true exophthalmic goiter, the shorter the duration of the period of goiter before operation, and the smaller the average weight of the gland at the time of its removal.

"5. The cases of toxic goiter of clinical group 1 (i.e., those in which the symptoms are of the cardiovascular variety) much more closely resemble cases of simple goiter in their pathology in all respects than do the cases of clinical group 2. A large number of them are of colloid-goiter type, the enlargement of the thyroid gland has existed for a longer period before operation, and the portion of the gland removed is materially larger than in those cases of clinical group 2.

"6. Finally, it may be stated that all the above pathologic evidence points to a constant relative association of increased secretion and increased absorption from the thyroid gland, proportional to the degree of toxicity on the part of the patient. We have as yet no absolute proof that such secretion and absorption is the cause of, rather than co-ordinate with, the symptoms, but the presented evidence strongly points to that conclusion."

Dr. George Dock considers simple goiter as usually a chronic disease, adding, in his

prognosis, the opinion that acute, or small parenchymatous chronic goiters that have not undergone degeneration, may be cured by medicinal treatment or by the patient's moving to another locality, and by boiling or changing the drinking-water. In old goiters, he says, "the course depends upon the position (not the size) of the tumor; also upon whether or not there is any pressure upon the trachea, esophagus, nerves, and veins; and the occurrence of change into an inflammatory or malignant condition. Increase of pressure may cause death from tracheal stenosis or heart disease, and this pressure may arise from sudden hemorrhage into the tumor or from the increased growth of the latter.

Dr. F. B. Cross says, in a recent article, that simple goiter appears at puberty and is more frequent in females; in fact, he states that he has never seen a case in a male. He says:

"The glandular enlargement is generally bilateral, in some cases the right lobe showing the larger increase; the enlargement may be nodular. The gland structure is firm but elastic and is distinctly not fibrous. I am unable to account for the development of simple goiter, though it has been variously attributed to drinking-water; this in special localities where goiter is common—northern New York, for instance. Virchow's statement that there is a tendency to thyroidic overgrowth because of the very marked blood supply provides a possible explanation. The treatment is nonoperative; iodides for a long time, iodine locally over the gland, and a change of drinking-water. With this treatment, Kocher states, he expects 90 percent recoveries of cases in children."

The Treatment

Dr. E. M. Rininger, writing in February, 1911, on the treatment of goiter, says regarding one form of simple goiter: "The regular rounded-out gland of young girls in puberty is a sort of hyperplasia and is different from the round, cystic tumor, and nineteen out of twenty get well without much of any treatment."

Dr. George Dock, in his article on goiter, published in October, 1909, says that the simple goiters require treatment with iodine, and that this remedy evidently is a sort of specific for the large proportion of goiters. He writes as follows regarding the medicinal treatment.

"In small, parenchymatous goiters of recent development, the results of iodine treatment are almost miraculous, and even the most minute quantity, as by the external application, suffices. . . . In regard to the choice of external and internal administration, I think that the latter is always to be preferred, and that external applications, if used at all, should never be carried to the point of causing blisters or permanent pigmentation.

"The method of choice is the administration of idoine in solution, alone or in combination with an iodide. As excretion is slow, accumulation should be avoided by either giving small doses or intermitting the treatment, or both. From 5 to 20 minims of Lugol's solution may be given three times a day, every other day. Many cases, even of large goiters, will subside in two weeks under this method. Others require a longer time. Thyroid extract has no advantages over iodine preparations, but many disadvantages. Roentgen-rays often cause reduction of the goiter, but often fail. Injections sometimes are useful, but are as dangerous as operations. Patients should not drink water unboiled, and in goiter-regions all drinking-water should be boiled."

Dr. H. M. Snow, writing, in 1910, on the treatment of goiter, cites a case of small simple goiter in a young girl, which he treated by using first the radiation from a small incandescent lamp, followed by gentle vibration; while in addition the mercury-biniodide ointment was used locally. Under this mode of treatment, the tumor nearly disappeared and the patient discontinued treatment.

Snow also cites a case of medium-sized, soft goiter which was treated with an ointment of mercury protoiodide (about twice as strong as the ointment used in the case cited above), and which was treated by him at his office with vibration followed by current from the resonator; no ointment, however, being applied to the tumor. In spite of very irregular treatment, the cure was perfect.

Snow's conclusion, from the above and other cases in his experience, is that the combination of some form of iodide of mercury and an electric treatment gives the best results in such instances. As a whole, he expresses preference for the biniodide over the protoiodide of mercury, and adds: "The current from the Oudin resonator, using a vacuum electrode, was used in most of the cases, supposedly driving in the iodine by cataphoresis, or, perhaps, by anodal pressure of the high-potential current. This has seemed the most satisfactory procedure of all in my hands and the steady diminution of the goiter from week to week most gratifying." The vibration he

uses as a preliminary treatment to soften the tumor and thus render it more easily influenced by electricity.

Reference to a recent article by Dr. Graham Chambers (May 1911), on simple goiter and its treatment, will show that his opinion as to the value of thyroid extract in this disease is distinctly opposed to that of Dock (previously quoted). He regards the type of goiter occurring at puberty as especially amenable to medicinal treatment, and, from his own experience, considers thyroid extract of especial therapeutic value in those cases of simple goiter. Of eight cases treated by him

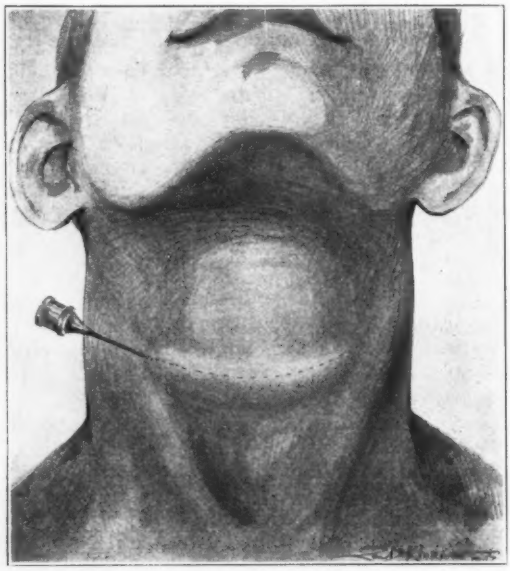

Fig. 1. Showing how to induce local anesthesia for skin incision.

in one year, the administration of thyroid extract in doses of 10 to 15 grains a day, without any local treatment, caused the disappearance of the goiter. In one of these cases, the goiter has existed for three years, while the other 7 were but of six months' growth.

Chambers also says, among other things, that the form of goiter in question is very common among girls, and that their course is variable, the majority of these enlargements disappearing without medicinal treatment; that some, however, persist for several months, or even as long as one or two years, and some become permanent.

In explanation of the power of thyroid extract to cause certain types of goiter to disappear, he offers the following interesting observations:

"The thyroid gland secretes an internal secretion, which takes an important part in metabolism, especially of proteins. If one feeds a human being or a lower animal thyroid extract, the urea output in the urine is increased; and, if one feeds some of the lower animals on a pure meat diet, the thyroid gland enlarges. The question naturally presents itself: Is the enlargement of the thyroid gland, such as occurs in goiter sometimes due to a stimulus resulting from defective metabolism?

This seems to me to be a probable explanation, because it affords an explanation of the frequent enlargement of the thyroid gland at puberty and during menstruation, pregnancy and lactation, as protein metabolism is generally increased in these states. It also explains why the exhibition of thyroid extract is of value in the treatment of simple goiter occurring at puberty, inasmuch as the administration of the drug removes the cause of the enlargement.

"Another theory of the origin of goiter is, that the cause is a stimulus resulting from autointoxication. This presupposes that the thyroid gland has for a function the neutralization of poisonous substances absorbed from the intestine or possibly formed during metabolism. This latter view," Chambers adds, "explains the mode of action of thyroid extract in the treatment of goiter."

Dr. T. M. Jones, in a recent article on "Hyperthyroidism," expresses the opinion that the treatment of simple goiter is, primarily, medical, saying:

"As a matter of fact, 50 percent of the cases of goiter will recover spontaneously or under proper hygienic, dietetic, and medicinal treatment; 25 percent will recover if to the dietetic, hygienic and medicinal treatment the injection of, for instance, carbolic acid be added, while the remaining 25 percent will resist every form of treatment except excision."

Surgical Treatment

Crile, writing (in 1907) on goiter, refers to 152 of his own cases, and regarding the practical surgical method of treating the thyroid gland makes the following statement: "The development of the surgery of the thyroid gland is best appreciated by the state-

ment that the mortality from thyroidectomy in simple goiters, in nonmalignant and in the benign tumors, has fallen from 40 percent to a fraction of 1 percent. In my own series, the last 101 such operations have been done without a fatality."

J. R. Wathen, writing, in 1910, on the indications for operation, asserts that "it is only in those patients whose goiters remain for several years; whose general health fails, whose pulse runs from 100 to 140 or more, who have disturbances of digestion of long standing, whose eyes begin to show enlargement or are protruding, and whose nervous system shows in muscular tremors that we should advise an operation early enough to avoid the late destructive changes seen in neglected cases; cases where the family doctor has for years been administering iodine locally and internally, electricity, and so on, all of which have been proven to be of no specific value."

I quote the same author further:

"The only real therapeutic measures of any pronounced value, aside from the operative removal of the gland, seem to be, some good heart tonic, as tincture of strophanthus, and such physiological methods as hydrotherapy and the rest treatment in properly conducted sanitariums. Based upon a comparatively large experience, I should say that, if we delay operation for several years, administering iodine and electricity until the heart-muscle has undergone degeneration, there is albumin in the urine, enlargement and fatty degeneration of the liver, lowered blood pressure, and so on, we have waited too long to attempt radical operative measures, and these patients will generally die.

"The proper time to advise operation, with an expectancy of a low mortality and good results, is, after this thyroid enlargement has begun to manifest the early symptoms of exophthalmic goiter and has existed for several months or years, with little or no signs of improvement. Avoid the young girls developing into puberty, as these will usually recover without treatment.

"In the selection of our patients for operation, we should realize that early operation, before complications have arisen, as in appendicitis, gallstones, and so on, offers the best results. Those cases whose pulse is not over 120 or 130 and which under careful preparatory treatment can be reduced to 100 or below, and whose arterial tension is not far from normal, will usually stand the operation well and give good results."

W. D. Hamilton, in an article in which the indications for goiter operations are discussed, quotes from the surgeon, James Berry, of London, the following significant statement:

"A parenchymatous goiter is one in which the whole thyroid gland is enlarged, all its vesicles being distended with colloid secretions. Small parenchymatous goiters not causing dyspnea should never be treated by operative methods.

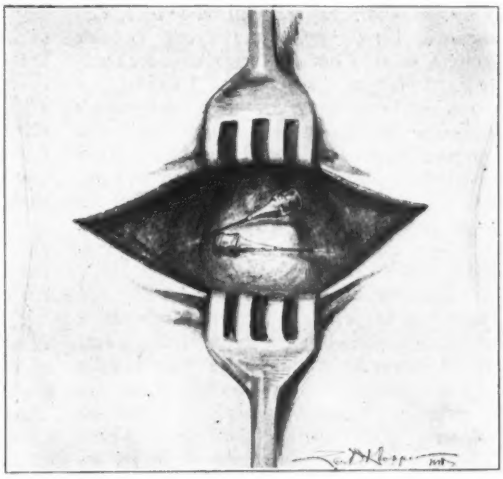

Fig. 2. Anesthetizing the deeper tissues.

"Very large, prominent parenchymatous goiters in young subjects are occasionally suitable for removal by extirpation, even when dyspnea is not dangerous or serious, provided that the patient is willing to run a certain amount of risk in order to get rid of an unsightly deformity.

"The lower down in the neck the goiter, the more serious are its pressure effects. The most dangerous of all goiters are those which are situated partly or wholly within the thorax.

"It should be borne in mind, also, that the soft trachea of a child or young adult is much more liable to sudden fatal compression than is the rigid and more resisting trachea of an elderly person. Certain rare cases of subacute inflammation, chronic suppuration, and sinuses left after injection may demand extirpation."

Hamilton then refers to Professor Kocher, of Berne, and his work regarding goiters, and quotes from him as follows:

"Kocher, whose diagnostic and surgical experience has probably not been equaled or excelled, gives the following indications for the operative treatment of goiter: 'We long ago abandoned the belief that every goiter must first be treated with internal remedies and referred to the surgeon only if internal medication fails: (1) Internal treatment is useless in struma nodosa, with nodules in process of secondary degeneration. Degenerative nodules can also be recognized directly by the changes in their consistency. Thus, all colloidal degenerated nodules (struma gelatinosa), as well as fibrous, calcareous, hemorrhagic, and cystic nodular goiters, must at once be turned over for operative treatment. (2) Diffuse colloidal tumors that have resisted several brief periods of iodine medication must be referred to the surgeon, especially if they have already given rise to functional disturbances. (3) All goiters that cause pronounced pressure symptoms must be treated by operation. (4) The same is true of those which produce cardiac symptoms and (5) of goiters that are abnormally situated, especially struma profounds and intrathoracic, which are very dangerous if the tumor continues to grow. (6) If a goiter develops suddenly and grows very rapidly and if the shape and consistency are unusual, it must be treated by operation, regardless of age. (7) A goiter showing sensitiveness on pressure, especially if it causes spontaneous pain, must be referred to the surgeon.'

"Further, under the head of surgical treatment of Graves's disease, Kocher epitomizes the matter in the following words: 'To say that this is still the best, is not enough. It has proved itself superior to any other form of treatment. It attacks the organ which is instrumental in producing the toxicosis, namely, the thyroid gland.'"

E. H. Schneider, in a recent article on the indications and contraindications for operation in cases of exophthalmic goiter, says that the surgical mortality is 1-2 to 5 percent, depending entirely upon the experience of the operator; while the mortality under medical regimen is from 10 to 25 percent, within five years. He therefore adds that every case of mild or moderate degree, in which the symptoms have continued for several weeks with the same or increased intensity, in spite of rest in bed and medical treatment, should be placed in the hands of a surgeon. Severe and remittent forms are also for the surgeon, he asserts.

Schneider then names the following as the important contraindications to operation: marked mental irritability (usually the earliest symptom, and including restlessness and insomnia); rapid loss of weight; great muscular weakness (the two latter indicating a profound toxemia); dilatation of the heart exceeding one inch; diarrhea, vomiting, and edema. He adds: "Edema and anasarca are usually secondary to cardiac insufficiency and require medical treatment until the heart has regained its compensation."

J. H. Jacobson, in a recent article, says that Basedow's disease can be cured in about 70 percent of all cases by the surgical removal of portions of the thyroid gland, adding that the improvement sometimes is proportional to the amount of thyroid tissue removed. He also, in common with the majority of observers, recommends the early operation for the two following reasons: (1) the operative mortality in advanced cases of exophthalmic goiter is very high, whereas in the beginning of the disease it is very low; (2) although a successful operation may be performed in advanced cases, the heart changes are but rarely relieved.

Among the various methods of operation that have been employed, such as ligation of the thyroid arteries, pole ligation, resection of the cervical sympathetic ganglia, resection of one lobe—either alone or in combination with a hemisection or ligation of the opposite lobe—the resection operations, experience seems to show, give the best results, according to Jacobson.

Although thousands of operations have been performed for the cure of exophthalmic goiter, Jacobson quotes the statement of another writer, to the effect that it is not yet known how much of the thyroid gland should be removed in any given case; as follows: "Some of the severest cases have been sufficiently cured by the removal of one lobe, and in some of the mildest the excision, almost total, of both lobes has been necessary to bring about a cure or a satisfactory condition." As a matter of fact, this question must be left to the judgment and experience of the operator.

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The Doctor's Horse

By NELSON S. MAYO, D. V. S., Chicago, Illinois

III.

IT IS taken for granted that the doctor has a satisfactory horse; if he has not, the sooner he gets one the better. A satisfactory horse is a source of real pleasure to the owner, not only while it is living, but long after the horse has traveled the trail to horse heaven, since the remembrance of his good qualities will still come to cheer a lover of good animals.

A source of satisfaction to the owner of a good horse is to have a comfortable home in which to care for it. The accompanying illustration and plan show the most conveniently arranged barn for one or two horses and a cow that the writer has ever seen. The appearance of the barn is excellent and it is of inexpensive construction.

Good care not only lengthens the horse's life, but it increases its efficiency, and this is of unusual importance to a doctor, since his work is irregular and frequently as severe for his horse-flesh as it is for himself.

Some Good Rules for Dobbin's Care

All harness and equipment should be of good quality and frequently examined for indications of weakness. It is dangerous to wait for an important part of the harness to break, since this accident may happen in the most inconvenient of seasons.

In severe or changeable weather, a large square woolen blanket should be carried to cover the horse while standing. Large safety blanket-pins should be attached to fasten the blanket to the harness or shafts in order to prevent its being blown off.

A good leather neck strap, that also fastens to the bit; should be carried for tying the horse, and in tying a horse remember the horseman's golden rule, and "tie short."

Fig. 1. A model barn for a doctor.

The floor of the horse stalls should be of wood or some sanitary composition material. Cement is too hard and slippery for this purpose.

The horse should be well bedded at night. While horses rest a great deal standing and may go for months without lying down, yet they rest better when they do lie down, and plenty of bedding keeps them clean and comfortable.

The horse's feet should be carefully looked after and, if he has to travel much on pavements or macadam roads, rubber pads under the front shoes will greatly modify the concussion and lessen the danger of injury.

Feeding and Watering

There is probably no one thing that contributes more to the efficiency of a driving horse than proper care in feeding and watering. The food should, of course, be of good quality. Bright, clean timothy or prairie hay is excellent. Mixed hay, containing a small amount of clover, is also good. Clover or alfalfa hay, if bright and clean, can be used, but it should be fed sparingly. Dusty, spoiled hay should never be fed to horses.

For a grain ration, oats should form the basis. Corn and wheat bran can be combined with oats to advantage. A good mixture is: ten pounds oats, two pounds corn and one-half pound bran. The general "rule of thumb" is a pound of grain and a pound of good hay per day for each 100 pounds live weight of the horse. Of course, the amount must be varied to suit individual cases and conditions. If the horse is working hard the quantity should be increased, and if not working it should always be reduced.

Keep the Horse "in Condition"

An ounce or two of common salt should be given the horse weekly, or brick salt may be kept before him constantly. Stock molasses added to the grain ration, and gradually increased until its laxative action is noted, is excellent to remove intestinal worms and make the coat smooth and mellow. As a "conditioner" for horses, when combined with good food, it is superior to "condition powders," and much more economical.

The stomach of a horse is relatively small and the bowels capacious, and it is important that the horse be fed and watered frequently, and only moderate amounts allowed. It is a frequent but mistaken kindness to give a horse an extra big feed, either before or immediately after a long hard trip. A horse cannot do his best work on a full stomach

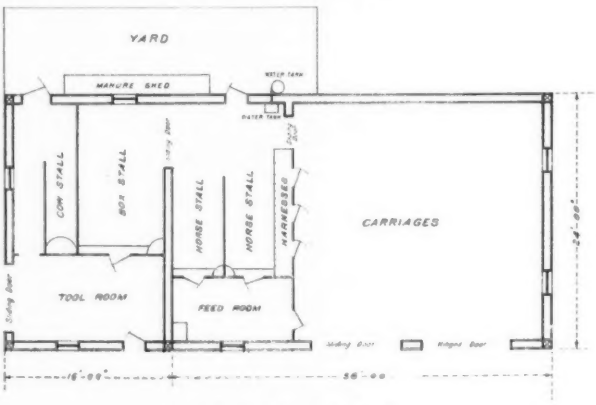

Fig. 2. Plan of the model barn.

and he should never be given a full amount of food or water when he is warm and tired. The horse should be allowed only a small amount of water first, and if very warm he should be covered with a light blanket and walked about until he has "cooled off." A little hay can then be given and then the horse given a good "rub down" with wisps of straw or rubbing-cloths, since this simple expedient rests the horse very much. Then give the horse a reasonable quantity of water and follow with the usual ration (or less) of grain and hay. Where it is necessary to make a change in the horse's ration, it should be done gradually.

Caring for the Horse's Coat

Frequent and thorough grooming adds much to the appearance of a horse. A light stable blanket keeps the coat clean and smooth.

If a horse has a heavy coat of hair, it is a good plan to have him clipped after the severe winter weather is over. A clipped horse should be protected against unusual exposure. Most driving horses have comparatively little hair on the legs below the knees and hocks, but if there is much, the legs should be clipped below these points during the winter and spring to prevent "mud fever," irritation of the skin due to accumulation of mud or dirt.

Where horses are used on pavements it is desirable that the shoes be removed and that they should have a run at pasture if possible for a few weeks every summer.

Another point to be remembered by the physician when putting his horse in strange stables is to inquire as to the presence of equine influenza or any other transmissible disease. While the doctor must expose himself to various infectious diseases, he should protect his faithful horse as best he can.

The doctor who has ridden or driven a good horse for a few years forms an attachment for his horse that is one of the real pleasures of life. This sentiment is well expressed by Brininstool in "The Ol' Cow Hawss":

"When my soul seeks peace an' quiet on the Home Ranch of the Blest,
Where no storms or stampedes bother, an' the trails are trails o' rest,
When my brand has been inspected an' pronounced to be O. K.,
An' the Boss has looked me over an' has told me I kin stay,
Oh, I'm hopin' when I'm lopin' off across that blessed range,
That I won't be in a saddle on a critter new an' strange;
But I'm prayin' every minnit that, up there, I'll ride across
That big Heaven Range of Glory on an Ol' Cow Hawss."

Why So Many Doctors Fail

By CHARLES B. GIFFORD, Muskogee, Oklahoma
Secretary of the American Veterinary Medical Association

WHY so many doctors, when taking up the study and practice of medicine, fail to reach the goal they set out to attain, is a subject that is causing many a backward reflection, not alone on the part of those members of the profession who have not met with the advancement and success they anticipated at the beginning, but also by the general public, among whom it is causing a feeling of unrest and lack of confidence toward the general practitioners; and it would be well for the latter to consider more seriously and ponder that sentiment, for their own future benefit and protection, as undoubtedly the doctors themselves are responsible for much, if not the greater part, of the cause of that unrest and broken confidence.

Being a mere layman, the man who holds down the cushioned editorial sanctum of the medical journal, as well as the practitioners, may think I am not qualified to write or speak on the subject; but, in this, as is true for the selection of a jury in a court of competent jurisdiction, I ask that prejudgment be withheld until after hearing the evidence and considering the merits of the argument.

It is not that I claim anything unusual in the way of educational ability, advantage or exactions, but my conclusions are based upon my own experiences as well as my observations and investigations of conditions that have presented themselves to me during many years, as a paying patient, and also in soliciting among doctors and doing business with them in a special line, which gave me the best of opportunities to get facts and figures. And during these years I have made it a special aim to get all the data and facts I could upon the subjects, both from practitioners,

medical journals, and other sources—with a certain object in view—and I venture the statement that but very few intelligent members of the profession will disagree with my statements and suggestions.

The young man, after years of ambitious study to become a man of medicine, after getting his medical diploma, looks around for a location to practice, finally selects what he considers a promising one (and ten chances to one it is a place where there already are too many practitioners), and, obtaining his license to practice, secures an office and—waits for customers. The older doctors already established there, and who look upon the already crowded field as their own, naturally do not look upon the newcomer with favor; some contemplate him with suspicion, others with scorn, the "mailed fist" being much in silent evidence. Still, they are all bound, or supposed to be, by the same code of professional ethics which they would have the layman believe includes the "open hand of fellowship and good will." Nevertheless, material difference in precept and in practice is evidenced in many instances; a fact observed particularly in the dissensions, strifes, and animosities among the members of the local medical societies when run and dominated by a self-selected clique—as most of them are. It is not wise for the doctor to think that not at least some of the public know of these things. The public does know, and is becoming more interested all the time, as shown by its turning to drugless treatment, Osteopathy, Chiropractic, Christian Science, and other claimed sources of relief.

The Young Doctor's Troubles

To get a start, and being keen for business, yet, possibly, handicapped by limited capital, as most beginners are, the young or new doctor accepts every patient that comes his way, booking the larger part, if not practically all, of his charges for services, taking promises for cash and trusting to Providence. The patrons he usually gets are those who owe the other doctors, the slowpay, promise-to-pay, nopay, all the derelict elements of the community. These derelicts of course are glad to see the new doctor come, having worked the others to a standstill with their promises; so when sickness or accident comes, they hook on to the new doctor and proceed to "work" him in the same old way.

Because of his lack of experience and business training (and this has not been a part of medical-school training—to the sorrow of the profession in general), the new man is not prepared to handle the business end of his profession as it should be. As the weeks and months pass and the amount of his book charges mounts up, he thinks he is doing a big business, getting along fine. He does not realize that some day there must be an accounting, an inventory taken, when his bank-account, if he happens to have one, has struck a balance, his cash is gone, while his credit in the community is slipping away.

During this period of watching and waiting and the accumulation of worthless book-charges, this doctor's expenses are going on, growing larger all the time; a fact which must eventually be met, yet to which he carelessly and fatuously gives but little thought. If he is married, with a growing family, there are to be considered the expenses of the home, with the unavoidable items for rent, fuel, light, groceries, meats, clothing, and so on. He gets behind in the payment of his bills, while collections are bad, not enough cash coming in to meet expenses; collectors are running after him, credit has become shaky, so that finally his troubles and worries bring him to the verge of distraction.

What is the poor fellow to do? Up to this time, he has followed the straight line of honest, legitimate practice, to the best of his understanding of the code of ethics and the dictates of his conscience. Then the opportunity is offered him to break faith with his conscience and the precepts of the code—a chance to get the much needed money with which to pay his bills by doing something. Doing what? To perform an illegal operation, one that pays big money, usually. And he takes the gambler's chance. This, dear reader, is a truthful portrayal of the pathway to ruin in thousands of cases, that need no other finishing touches.

It's a Matter of Cash

Thus, the failure or the success of the doctor, analyzed, is a matter of cash, *cold hard cash!* The larger percentage of doctors, after they have rendered the service and booked the charge and have waited and waited for the final fulfilment of fulsome promises given in lieu of payment, are afraid to demand what is due them, for fear of offending these patrons; procrastinatingly they hang on to the account, allowing it to grow older and older, while they themselves are on the verge of financial and professional ruin.

Fear of offending the delinquent patron—what a delusion! This is the devastating influence that eventually leads to illegitimate practice, leads to the downfall of the doctor

in his legitimate practice and to the loss of respect of his community, with the career often ending in the criminal courts.

Fear of offending his patron—what a delusion! By neglecting to collect his bills with reasonable promptness, keeping after the delinquents persistently until he gets his pay, the doctor not only loses a large amount of money due him, but, worse, he loses the respect and confidence of these same patrons whom he fears (who, indeed, may include the derelict ones), as well as that of the community in general—for it has its eyes on him.

Just carry the ordinary debtor along for a few months, or, as many of the doctors do, for years (during which time in all probability they are patronizing the other doctors) without the doctor's making a special and persistent effort to get his money, the debtor is sure to become the secret enemy of the doctor and will work against him among his friends and acquaintances, keeping them away from this doctor as long as they themselves are owing him. This is but the derelict human nature, and is indulged in with doctors more than in any other occupation, for the reason that it is known (and admitted), with but few exceptions, that doctors are poor business men, careless and reckless in matters of business, and easy to "work." This not only is true in the matter of their professional work, but in many other ways.

A Good Collector Makes a Good Doctor

The doctor who looks closely and carefully after his collections, as he should, persistently following the people up until he gets his pay, not only is enabled to pay his own accounts promptly, thereby retaining the good will and respect of his creditors as well as of the collectors (a most valuable asset!), but he can keep up a good appearance, provide himself with the best medical textbooks and medical journals, and from time to time increase his professional equipment, so as to keep abreast with the progress of medicine; all of which attracts the eye of observant people and inures to his benefit.

On the other hand, the doctor who does not do this, who, because of his stupid delusion, his ungrounded fear, neglects this important matter (and too many are guilty) cannot make a success of his work, becomes slovenly, grouchy, incapable, and this also is noticed by his patrons and the general public, to his serious detriment, even more than the members of the profession are willing to believe; even though aware that something is radically wrong somewhere.

Only recently I was visiting a doctor acquaintance in his office, and discussed this same topic—the business end of the doctor's practice. During my visit, possibly three-quarters of an hour, three local collectors called upon the doctor with bills, and each one was obliged to leave without collecting a cent—the doctor was financially broke, as he told me. During our talk, I listened to what to me otherwise might have been a pitiful tale of wo and hard times. Pitiful otherwise—why "otherwise"?

This doctor had told me he had outstanding considerably more than $10,000, some of the accounts considered as good as gold, some considered good but slow, others probably bad, yet still others looked upon as absolutely worthless and not worth while to bother about. According to this doctor's confession, many of these accounts, the most of them, in fact, remained uncollected because of his *delusion*, his *fear*. This doctor (as most of them) had made but little effort to get his pay, accepting promise after promise, which were not redeemed, and he was procrastinatingly "hanging on to his books" for fear that they would get away from him, while many of the debtors, money and all (as the owl in its flight), had gone to other parts, leaving no trace of their whereabouts.

As I talked to this doctor, he expressed himself willing to do almost anything to get the much-needed money to pull him through. He was laboring under a nervous strain such as caused me to ponder the question whether he would be a safe man in this condition to call in a case of serious sickness, or even in a minor one, and the echo came, "Would he?" I do not hesitate to say that I should not want a doctor who, as I knew or had cause to believe, was laboring under a mental strain of this nature, to be called in to take care of me or of anyone in whom I was interested.

Open Your Eyes—Wake Up!

It seriously behooves the medical practitioner to open his eyes and ears and to use his brains to reason, that he may know that he is constantly being watched, and very closely, by eyes that are more observing and critical as they are being opened to enlightenment, and being judged by minds more exacting, and that this critical attitude is causing a greater loss of confidence on the part of the lay public.

As undoubtedly it is a question of cash, the doctors should wake up to see the errors of their ways, to release themselves from the bondage of an apparent bankrupting code of

ethics, to the extent of giving closer attention to their collections, the one near chance to save themselves from financial and professional ruin, and to keep them out of the field of medical quackery, if not the criminal courts. If they have not the inclination, time, or facilities to look after their collections themselves, they should secure the services of an outside agency; and, as to this, I would suggest resort to a reliable collection agency (there are such). A reliable agency—and it matters little where it is located—undoubtedly is best equipped for rendering the most satisfactory service possible, as it has experienced help, facilities—and has no other iron in the fire.

Another feature that I wish to bring out, one that seems of interest particularly to the subscribers of medical journals, is, the absence in probably all of a department devoted to business—the business end of the practice of medicine. There is no subject of greater importance to the doctor than the question of information on the best ways and means of handling his collections so as to get the most money out of them; yet, it is a subject that is neglected and slighted on the part of editors and publishers, although the matter is really one of vital interest.

These men know the great need for more information on this important subject, of material interest to the medical profession, still, they do not seek it, and more often decline it when offered for publication, turning the papers down as not being adapted to "their ideas" or "not in their line"; which causes me to believe that many (not all of them) of these journals are published, not at all in the interest of the profession, but solely for the financial gain and benefit of the publishers themselves. Do not understand me that I look upon all medical journals in this light—I do not. There are a number of good ones, with a heart and a soul and with an interest in their subscribers' welfare, as proven by their efforts to publish with each issue a journal of greater benefit and value.

Doctors can correct many of these detracting conditions, if they will, and medical journals should join in rendering such known needed assistance as they can in their behalf, which at the same time would be to the future benefit and advantage of the publishers themselves.

SOME say that the age of chivalry is past. The age of chivalry is never past so long as there is a wrong left unredressed on earth and a man or woman left to say, "I will redress that wrong, or I will spend my life in the attempt." The age of chivalry is never past so long as we have faith enough to say, "God will help me to redress that wrong, or if not me, those that come after me."

—Charles Kingsley.

What Others are Doing

RULES FOR CONSTRUCTING FLAT-FOOT SUPPORTS

According to official reports for 1909–10, more than 1000 men of the Prussian army entered the hospital, disabled by flat foot, with a total exceeding 13,000 of days of treatment. Flat foot, hence, must be considered a serious problem in national economics. To meet this, Military Surgeon Baumbach has studied this question, and (*Deut. Mil.-Aerztl. Zeit.;* cf. *Militaerarzt,* 1915, No. 1) submits a set of rules to which foot-supports should conform.

The foot-support, preferably, is made of steel plate, and so constructed that it is not to be fastened to the shoe. It must (1) raise up the tilted calcaneus on the principle of the inclined plane. (2) It must encompass the entire section of the foot from the heel to the balls of the toes. (3) It must be curved upward on the outer edge, and must support the hollow of the foot only to the extent to which this portion of the foot can naturally be raised. (4) In order to meet these requirements, an individual plaster cast must be taken of each foot, from which to fashion the plate.

CAUSE OF THE PULSUS ALTERNANS

The unproven theory that the pulsus alternans, or alternating rhythm of the heart beat, depends upon a disturbance of the cardiac contractility is rejected by K. Amerling (*Sbor. Lekar.;* cf *Wien. Med. Woch.,* 1915, p. 46), who believed he has discovered the real cause to lie in a superhydration, or hydrous infiltration, of the heart-tissue.

Amerling bases this opinion upon the fact that he has observed this anomalous pulse to occur in nephritis associated with generalized edema. Furthermore, he has produced this condition experimentally by immersing isolated frog-hearts in distilled (nonphysiologic!) water, either completely or partly so, as also by circulating through the heart, *in situ,* hydremic blood. In the latter experiment, the frog swells up (that is, when water is allowed to drop upon the exposed intestine), and then sometimes the heart will assume the alternating rhythm.

ALBUMIN- AND FAT-FREE DIET IN CARDIAC INSUFFICIENCY

Han Januscheke, of Vienna (*Wien. Med. Woch.* 1915, No. 1) reports three cases of cardiac insufficiency in which a surprising and rapid restoration of compensation was accomplished under the following regimen:

The ordinary meatless diet consisted of 100 to 140 Grams dextrose dissolved in tea or lemonade, either alone or with three light biscuits ("semmel") a few cakes (German!), garden vegetables (no legumes!), soup, and fruit. Intercalated, there were days when the diet was devoid of or poor in albumin and fat. In addition, digitalis-therapy went hand in hand. The refractory heart soon began to respond to the medicament. This course of diet may bring success where the Karell milk-cure has failed.

TETANUS CURED WITH MAGNESIUM SULPHATE HYPODERMICALLY

The following case of tetanus has been reported (*Wien. Med. Woch.,* 1914, p. 2520) by Herman Schlesinger. The patient had been seriously wounded, in battle, by shrapnel, one piece perforating the stomach, another penetrating the abdomen, and intense traumatic tetanus followed in the train.

A magnesium-sulphate therapy was decided upon; however, because of the danger (arrest of respiration) attending the customary intraspinal administration of this agent, the hypodermic method was adopted. The solution employed was of 25-percent strength, and of this at first 20 Grams was injected twice daily, which later was reduced to once a day.

Immediately the clonic attacks came on less often, the pain diminished, and sleep became possible. Where there was not an instantaneous cure, the impression gained was, that the symptoms were beneficially influenced in a marked degree. After an intervening attack of dysentery, the patient

eventually was completely cured, and healed of his ghastly wounds.

"PUNCH," AND TYPHOID INOCULATION

We learn from *The Canadian Practitioner and Review* that the British comic weekly *Punch* has been doing valiant service for scientific medicine in England, through its support of typhoid prophylactic vaccination. An episode which is particularly interesting to us is related by our Canadian contemporary, as follows:

"The antiinoculation members have recently done much advertising. The public generally were amazed to see one of their full-page advertisements in *Punch* of January 13. As a consequence, the explanation in the next issue (January 20) was received with great satisfaction. The following is the statement: 'The advertisement which appeared in our last week's issue, opposing the principle of the inoculation of soldiers against typhoid fever, came in very late, and unfortunately its contents were not submitted to the Secretary. "Mr. Punch" is most absolutely in favor of inoculation against typhoid fever for the troops.' "

INJECTION-TREATMENT OF HEMORRHOIDS

Here is a combination, recommended by C. A. Freeman in *Ellingwood's Therapeutist* for November, 1914 (p. 414), for the injection-treatment of hemorrhoids. This formula has been used by him for more than twenty years and has given very satisfactory results. It is as follows:

Carbolic-acid crystals	drs. 7
Glycerin	dr. 1
Cocaine hydrochloride	grs. 20

With the syringe partially filled with this solution, the needle is inserted into and almost through the tumor; then the liquid is injected drop by drop as the syringe is being withdrawn, meanwhile the effect being watched. After it is half withdrawn, the needle, if necessary, may be passed to one side or the other, so as to destroy the entire growth with a single injection. Only a few drops of this solution are needed for a single pile tumor. There is almost no pain, and the patient rarely needs any after-care.

THE TREATMENT OF SEPTIC WOUNDS

Military surgeons who are treating wounds in France and Flanders are unanimous in their testimony that these wounds are followed by a larger percentage of septic complications than those received in any of the recent wars. This is owing to the fact that this contest is very largely a continuous battle of the trenches, the men being plastered with mud and living constantly under insanitary conditions, without opportunities for personal cleanliness.

In the *Paris Medical* for February 13 (p. 365), Mencière, who had had five months of experience with operative work in the hospitals, both at the front and in the rear, tells something about his experiences with septic wounds. He has found that the aseptic methods in vogue in surgical practice for a number of years could not be depended upon under the present conditions. He has found it necessary to resort to antiseptics more than at any time before; and not one of these, simply, but several.

In bad wounds, when there is sepsis or fragmentation of the bone, he recommends removal of the bony particles that may wound the blood-vessels, then, in order, cleaning of the wound, multiple incisions so as to secure proper drainage, and then successive washings with three different antiseptics, namely, corrosive sublimate, 1 : 1000, phenol solution, 25 : 1000, and hydrogen-dioxide solution, 33 percent. These three antiseptics are used, because each has its own special indications. An infective organism which will resist one parasiticide will yield to another, and in these field-wounds many harmful microbes abound.

The permanent dressing applied by Menciere consists of a gauze drain or wick dipped into the following mixture:

Iodoform	Gm. 10
Guaiacol	Gm. 10
Eucalyptol	Gm. 10
Balsam of Peru	Gm. 30
Ether	Gm. 100

These applications favorably influence the most septic wounds, and often yield unhoped-for results. Suppuration and the bloody discharge cease, leaving behind a healthy, carmine-red appearance of the tissues, and healthy granulations appear. Cicatrization frequently is exceedingly rapid. For three or four days, the wound is washed daily with the three antiseptics mentioned; then, as the condition improves, the washing is restricted to a 33-percent hydrogen-dioxide solution.

The drainage with the wicks dipped in the iodoform-guaiacol-eucalyptol solution is continued, the wound being dressed with this preparation each day. It is essential that

the wound be left open and that the drainage is perfect. Glass drains are recommended, when obtainable.

Mencière declares that his wound-balsam is powerful as an antiseptic, deadly both to the microbes and their spores, while harmless to the cells, stimulant to the phagocytes, and stimulating repair of the wound. He has succeeded with this method of treatment after having tried all other antiseptics, including formalin, salicylic acid, tincture of iodine, and even iodine vapor.

HYALINE CASTS IN THE URINE

In a letter to *The Lancet* (Jan. 2, p. 45), Sir James F. Goodhart declares that hyaline casts are found so often in the sediment of centrifugalized urine, when there are no other evidences of renal disease, that many times they may be passed over as of no significance. Sir James doubts whether many of these casts come from the kidneys at all and believes that, if there is no other indication of renal disturbance, they may be ignored. Surely, he says, they cannot all be washed-out blood casts, and he raises the question whether many of them may not be mucinous and added to the urine in transit from the kidneys to the bladder.

GLYCERIN IN BROMIDROSIS

The offensive smell of sweating feet, T. H. C. Benians writes in *The Lancet* for December 5, 1914 (p. 1301), results from a number of substances, the most important being certain aromatic bodies, probably indol and perhaps skatol, in conjunction with fatty acids. Another, and possibly the most harmful, body present is ammonia, which has a solvent and destructive action upon the keratin of the skin, and probably it is this which gives rise to the blisters and abrasions occurring in patients suffering from sweaty, ill-smelling feet.

Benians asserts that glycerin and certain carbohydrates applied to the feet will prevent the formation of ammonia by the indol-producing bacteria. Also, the incidental fermentation of the glycerin produces a marked acidity, thereby correcting the local harmful alkalinity and preventing the formation of indol and other end-products of protein destruction.

In practice, Benians has found that applications of glycerin keep the skin of the feet in a healthy condition. The treatment presents no difficulty, involving only the occasional application of small quantities of this substance. Glycerin keeps the skin moist, although this does not mean that the horny protective covering has been softened. On the contrary, while retaining its protective qualities, the skin is merely rendered supple, and, hence, will wear better than a hard and brittle epidermal integument of the feet.

Several cases are reported in which the method was tried and found effective, merely a little glycerin having been rubbed over the soles and toes before the socks were put on in the morning.

INDICATIONS FOR SERUM-THERAPY IN TETANUS

Tetanus-antitoxin is best administered, E. v. Behring, of Marburg, writes (*Deut. Med. Zeit.*, 1914, p. 1833), by injecting it into trunk nerves leading centripetally from the wound, after, if need be, laying them open with the knife. The local treatment consists in applying coarse crystalline iodoform and irrigating the wound with a 1-10- to 1-2-percent solution of iodine-trichloride solution. The antitoxin disappearing rapidly, it must be repeated at appropriate intervals. The author mentions the immune-serum of the Behring works as of exceptionally low anaphylactic toxicity.

Commenting upon the foregoing article, R. Koch, of Frankfurt, expresses the hope that the serum-treatment of tetanus, at present greatly discredited, will again be taken up by the profession; and he declares that three facts are definitely established, namely: (1) The neutralizing action of the antiserum upon the tetanus-toxin has been firmly proven by experiment. (2) Nevertheless, most of the victims specifically treated succumb. (3) Here and there tetanized individuals recover without receiving antitoxin.

These facts do not justify us, though, to condemn antitoxin as worthless in practice. Rather, we should recognize in tetanus a disease not unamenable to treatment, and, profiting by our experiences with other sera, try larger and more frequently repeated dosage and adapt the manner of administration of the antitoxin to the exigencies of the point of entrance of the virus. Von Behring also expresses the hope that the production of antitetanus serum—now furnished on too small a scale—quickly may be enormously increased, and thus, in the present war,

insure the saving of a multitude of lives that need not, and should not, be sacrificed.

INTRALUMBAR INJECTIONS IN NEURAL SYPHILIS

H. Campbell details (*Brit. Med. Jour.*, 1914, p. 577) the successful treatment in 10 cases of syphilitic and parasyphilitic disease of the nervous system by means of intralumbar injections according to the Swift-Ellis method. In the author's opinion, this at present is the only treatment promising arrest of the degenerative process.

PAPAVERINE IN PERTUSSIS

At a meeting of the Society for Medicine and Pediatrics of Vienna, C. Hochsinger, of the staff of municipal hospital for children, spoke of the value of papaverine in mitigating whooping-cough, as observed in the case of 21 children thus treated in his institute, two of whom he presented before the audience; thus corroborating the claims made for this alkaloid by Popper. The results in all the patients virtually were the same.

Always, the speaker averred (*Wien. Med. Woch.*, 1915, p. 94), the action of the papaverine hydrochloride became noticeable immediately: vomiting generally ceased instantly, the seizures of coughing were reduced in frequency, the attacks consecutively shorter and less severe. Complications never occurred. The cough, as a rule, persisted, of course, inasmuch as the disease itself was not cured; nevertheless, the speaker believed he had seen a cutting-short of the paroxysmal stage by the papaverine. It was admitted, though, that the epidemic may have chanced to be a mild one; but only future experience with epidemics can solve that point.

In the nature of the work, the physician had to depend upon the tales of the mothers; still, their effusive praises of the medicine given them for their children, after having found all previous treatment worthless, or nearly so, would seem to establish the effectiveness of the papaverine.

The mode of action Doctor Hochsinger conceived to consist in a relaxation of the various muscles involved; an influence which, indeed, might serve to throw new light upon the nature of pertussis. According to Pal, he pointed out, papaverine reduces the tonicity of the smooth musculature. Moreover, that author asserts it to be almost nonpoisonous, a fact highly important in treating infants, since the narcotics in really effective dosage are frought with too great danger at their age; but this alkaloid does not behave as a narcotic.

Taken all in all, the speaker thought that in papaverine we possess a positive, reliable remedy for whooping-cough, in spite of its being purely symptomatic; that it represents a marked advance in the treatment of this refractory malady, and that by all means it should be given a fair trial in the paroxysmal stage.

One case was instanced, as covering all the rest. The patient was a 4-year-old girl, who had been coughing for two weeks, and the last three days the attacks had taken on the character of typical whooping-cough. The attacks were occurring from 15 to 20 times in the daytime, and 10 or 12 times during the night, at which the staccato coughing-fits succeeded each other three or four times. Hence, the case was a severe one; the more so, since always the child vomited masses of glary mucus, sometimes food, too.

A prescription was written for a 0.03 : 100 solution of papaverine hydrochloride (grs. 5 in ozs. 3 1-2), a teaspoonful to be administered every two hours. Two days later, the coughing-fits were considerably diminished, only two having occurred in the day and three at night. There no longer was vomiting, the inspiratory fits ceased, the cough became very light, and the spells occurred only rarely, while the child slept comparatively undisturbed. Four weeks after instituting this course, the child was dismissed as cured.

In the discussion by the members, A. Goldreich, collaborator with the speaker, corroborated the latter's statements; besides, in his private practice, he had gained the definite impression that, papaverine, in appropriate dosage, stopped the vomiting and materially abbreviated the paroxysmal stage.

E. Popper, also of the hospital staff, stated that, in another department, the same treatment had been employed in a large number of cases, with similar success. Only, one must not be too guarded in the dosage, and the remedy, if practicable, should be given at 1-hour intervals. Slight somnolence, at most, may be observed, in infants, otherwise never any cerebral phenomena. All symptoms are diminished or allayed, but whether permanently cured remains a question, as also whether the drug should be given from the start; they now give it only when the disease is at its highest.

Dr. K. Hochsinger (not the lecturer) expressed himself to the effect that he has found papaverine to excel all other remedies in whooping-cough, particularly in decidedly ameliorating the intensity and duration of the paroxysms. However, he disagreed with Pal regarding the alleged absence of narcotic properties with respect to children; for they become markedly somnolent under doses of 5 cg. repeated at 2-hour intervals. But, he said, it is children affected in this manner who are most benefited by this alkaloid.

INFLUENCE OF IODINE ON THE CIRCULATION

A. Lehnforff, of the Clinic at Prague, has been conducting experiments upon the influence of iodine on the circulation (*Arch. f. Exp. Path. u. Pharm.;* cf. *Ther. d. Gegenw.*, 1914, p. 588). Using cats, he administered sodium iodide intravenously, and he observed increased blood pressure and a decided augmentation of the volume of the heart beat. The author considers this fact to furnish an explanation of the beneficial action of the iodides, even though these are taken by mouth, in that the drug insures a more thorough insanguination of the organs. This deduction, though, is considered by other writers as rather hazardous.

PROCEDURE IN VENEREAL ULCER

Often a clinically absolutely typical soft ulcerous lesion may really be a true primary luetic affection, even when the test for spirochetes results negatively. For this reason, H. Mueller, of Mainz (*Muench. Med. Woch.*, 1914, p. 1285), following A. Neisser, insists that at all events several salvarsan injections should be given, so as not to miss the opportune moment for prophylaxis.

FUNCTION AND THERAPEUTIC USES OF CORPUS LUTEUM

L. Leitz, H. Wintz, and L. Fingerhut, in collaboration, have succeeded in isolating from the corpus luteum of cows two specific bodies playing opposing physiologic roles; the results of their labors being published in the *Muenchener Medizinische Wochenschrift* (1914, p. 1657 and 1734).

One of these bodies is a lipoid, which the authors term "luteolipoid." This principle is a limited antihemorrhagic, as shown by animal-experiment as also, hypodermically administered, in the case of not less than 200 women. This property is peculiarly limited, in that it checks bleeding only in menorrhagias when there exists no organic alteration of the genital organs; consequently not in hemorrhages of pregnancy, inflammatory diseases of the adnexa or the like. In dysmenorrhea, it simultaneously allays the pain.

The other principle, which has been called "lipamin," is a lecithalbumin. In contrast to luteolipoid, this substance promotes uterine bleeding. In experimental animals, it hastens development of the genitalia. In the case of women, if administered sufficiently long, this lipamin is capable of establishing menstruation when amenorrhea exists. Thus, normal menstruating depends upon the corpus luteum's providing lipamin and luteolipoid in correct balance and amounts.

INTERNAL TREATMENT OF WOUND INFECTION AND SEPSIS

Concerning the subject named in the title, H. v. Hoesslin, of Landau, writes essentially as follows in the *Muenchener Medizinische Wochenschrift* of September 29 last:

"These lines are intended to recall to mind a remedy which, owing to the innumerable new synthetics flooding the market, has been completely forgotten by most clinicians, a drug that has been proven to influence beneficially, particularly in the initial stages, wound infections, lymphangitides, and phlegmonous inflammations, tending to insure rapid recession of swelling, redness, purulency, and fever-temperature. I refer to mercury in minute dosage, best in the form of a readily soluble salt (Hg Cl_2—with KI, to modify its disagreeable metallic taste).

"Give of the mercury bichloride 0.015 to 0.02 Gram (gr. 1-4 to gr. 1-3) in a day, and continue for two, three, four days in succession; diminishing as the inflammation goes down, until the dosage of 0.0075 Gram (gr. 1-8) per day is reached, at which point the mercurial may be continued for (a little) longer. [The text has it "Gm. 0.075," but this must be a misprint.—ED.] Should the fever be considerable, the dosage may, for a short period, be increased to as much as 0.025 (gr. 2-5) or even to 0.03 (gr. 1-2) Gram per twenty-four hours. Between the separate doses, the patient is given a little nourishment —milk, for instance.

"The following prescription may serve as a guide for dosing the medicine:

Mercury bichloride	Gm.	0.04 (gr. 3-5)
Potassium iodide	Gm.	0.04 (gr. 3-5)
Syrup (favorite flavor)	Cc.	20.00 (drs. 5)
Water, enough to make	Cc.	200.00 (ozs. 7)

Label: A tablespoonful every 2 (or 3) hours.
Note: This mixture is to be repeated once!

[The favorite corrective among German physicians is orange-peel syrup; here, however, the more pronounced syrup of sarsaparilla, or that of wintergreen or red raspberry is preferred. However, no reason is apparent why this nasty chemical should not be dispensed in the form of small-dose pills. As to the single dose, the author seems to reckon upon a division into 4 or 6 in the day.—ED.]

"These small doses, lying far below the maximal, are recognized as being of value in cardiac dropsy. Besides, this treatment has given excellent results in the various infective diseases, such as typhoid fever, pneumonia, and diphtheria, being especially in vogue for the latter before the antitoxin-era."

PYORRHEA: ITS CAUSE AND TREATMENT

Yet another interesting contribution upon pyorrhea appears in *The Journal of the American Medical Association* for February 13 (p. 553). In this paper, Bass and Johns describe in detail their method of securing the entamœba buccalis from pyorrhea lesions, and mention some very interesting facts regarding the pathology and pathogenesis of this dental disease. Of particular interest to the physician and dentist, however, is the further record of the experience of these investigators with ipecac and its alkaloids, emetine and cephaeline. These drugs, the authors declare, "are such perfect entamœbicides that nothing better could be hoped for."

They have used emetine hypodermically in a large number of cases, and later have applied it locally in the mouth, but have not tried injections into the pockets, as employed with success by Smith and Barrett. While they understand that some particular pocket can be treated locally, with excellent results, more general improvement, in their opinion, will follow the systemic administration of the drug. Only in this way can all lesions be destroyed. By the time the disease has reached the stage to be recognized by the patient or by the physician or dentist, it mostly is far advanced in one or more places and there are many lesions infected with the entameba. This indicates the necessity for systemic treatment.

However, the authors lay considerable stress upon the use of local applications of ipecac [Still better, of emetine solution.—ED.] for the purpose of preventing reinfection. Such solution should be forced in between the teeth, the excess being spit out. In spite of the prophylactic local use of emetine, the authors have observed that relapses or reinfection have occurred in one or more of the lesions in about 12 percent of their patients, within four weeks of the time the emetine treatment was suspended. In case there is such a reappearance of the parasite, the full course of emetine injections should be repeated, they declare.

Considerable stress is laid upon the importance of the proper dental treatment of the diseased tissues. When there is necrotic tissue surrounding the root of the tooth and much of the peridental membrane supporting the alveolar process has been lost, we cannot expect to restore the patient's mouth to its former healthy, natural condition. The greatest benefit from the emetine treatment therefore depends upon the early use of emetine, before great destruction of tissue has occurred. Yet, even in advanced cases, the progress of the disease may be arrested.

STILL MORE ABOUT PYORRHEA. PERIOSTITIS DENTALIS

Another article by Bass and Johns on pyorrhea alveolaris appears in the February number of *The New Orleans Medical and Surgical Journal*, on page 671. In this paper, the writers declare that amebas (chiefly, if not wholly, of the species entamœba buccalis) are demonstrable by proper means in the lesions of pyorrhea alveolaris in all stages of the disease. On the other hand, they have not been able to demonstrate the presence of these parasites in material taken from healthy gums. They have, however, found the organisms in lesions which did not seem to extend to the alveolar process. It is their belief that these lesions are evidences of the early stages of a disease which later reaches the alveolar process and finally, through destruction of the peridental membrane, results in loss of the teeth. What we call pyorrhea alveolaris, therefore, is, in fact, the late stage of a disease which should more correctly be called periostitis dentalis.

Recurring again to the subject of treatment, the authors now report 200 cases of Riggs' disease treated with emetine. After this drug was given in 1-2-grain doses for

three successive days, the amebas persisted in only from 2 to 5 percent of the cases. However, the organisms disappeared only in a small percentage of these, following a single dose of the emetine. In most cases they do not disappear if the interval between the doses is more than twenty-four hours; which emphasizes the necessity of giving these injections at intervals not greater than twenty-four hours apart and for at least three doses. Sometimes this course of treatment may be extended to six days, depending upon the extent of the disease in the particular instances.

In about 12 or 15 percent of the cases apparently cured by this course of treatment, the lesions have reappeared after an interval varying from a few days to five weeks after cessation of emetine treatment. In a few instances, recurrence was observed also in the case of patients who had applied fluid extract of ipecac when brushing the teeth, which, theoretically, should tend to prevent reinfection. This suggests the desirability of using a preparation more reliable and more nearly standard in strength than ipecac for the local treatment. For local use, we urge employing a 1-2-percent solution of emetine hydrochloride, as recommended by Barrett and Smith.

Should the trouble recur, it is also desirable, as Bass and Johns point out, to repeat the course of emetine treatment after a proper interval.

"It should be understood," write the authors, "that the emetine destroys the amebas by some specific action, but that, after the amebas have been destroyed, the lesions remain and will require a variable length of time to heal, according to the extent and character of the lesion and of other influences. The pocket is usually very much more extensive than would be supposed, and those interested in the disease may be enlightened by passing some suitable small instrument to the bottom of pyorrhea pockets. Upon careful dissection, we find that the pocket contains necrotic and, often, tough tissue (especially periosteum in the bottom), and more or less carious bone. For nature to liquefy and remove this material, will, necessarily, require a considerable length of time, during which there must continue to be more or less pus formation. As long as the lesion is not healed up, it naturally offers favorable soil for reinfection."

This again indicates the necessity for proper dental treatment to remove carious or necrotic tissue, as well as persistence in the local and general treatment where the response is slow.

PHYSIOLOGIC ACTION OF PANCREATIN

In the parenteral administration of pancreatin (pancreatic extracts) for carcinoma and tuberculosis, various toxic phenomena were observed in connection therewith, and this toxicity has been looked upon as an inherent property of the pancreatic ferment. This now is denied by F. Mueller and S. N. Pinkus, of the Institute of Animal Physiology of Berlin. The contention of these investigators (*Biochem. Zeitschr.;* cf. *Ther. Monatsh.*, 1914, No. 8) is, that, the more refined the pancreatic product, the less pronounced its toxic side-effect will be.

Thus, for illustration, they instance and compare Fairchild's trypsin with several brands popular in Germany, to prove their point. The latter preparations, of unsatisfactory permanency and having a peptic index ranging from 32 to 64, produced those toxic phenomena generally attributed to them.

On the other hand, the Fairchild enzyme, while markedly stable and showing a peptic index of 4000, virtually was devoid of untoward side-effects, barring only reduction of the blood pressure. And even this effect was shown not to be attributable to the enzyme itself, for it was not removed by the destruction of the trypsin by means of heat.

BULGARIAN BACILLUS ANTAGONISTIC TO CHOLERA

An interesting case in which Bulgarian buttermilk contributed to the cure of a person who was a vibrio-carrier, is reported, in the *Militaerarzt* (Jan. 9, p. 10), by Dr. Karl Roesler, commander at the imperial hospital for epidemic diseases at Troppau (Austria). This occurred in 1911, when the author was connected with the Hygienic Institute of the University of Graz, Styria, when a number of true cholera cases occurred in those regions, the true nature of which was bacteriologically verified.

The patient in question was one of the sister-nurses who became infected with the cholera-vibrio and was found to pass the infective microbe regularly in her stools, as established by daily control. When for this reason the nurse at last was to be ordered discharged, the microscope suddenly, one day, revealed the absence, from the stools, of the cholera-germ, and this negative result

was observed on two subsequent days. A searching investigation thereupon being instituted, it was revealed that the sister had of late been drinking yoghurt-milk at irregular periods.

As a consequence of this revelation, the nurse now was ordered to drink this Bulgarian buttermilk regularly in liberal amounts, whereupon in about three weeks she became absolutely free from the infesting cholera-germs, and so continued after omitting the yoghurt.

Doctor Roesler suggests further experiments in this direction (under strict control, of course), first trying vibrio-carriers, then passing on to mild cases of cholera. The presumptive agent in this cure is the Bulgarian bacillus, although the lactic acid might be a factor. Incidentally, tests *in vitro* might not be amiss.

PERMANENCY OF RESULTS OF NEPHROPEXY

Having instituted inquiries as to the after-results of fixation of floating kidney, W. Billington (*Brit. Med. Jour.*, 1914, p. 1914) secured the subsequent history of 97 cases, as related by the respective family physicians. These reports establish the fact that the greater proportion of the subjects remain free from symptoms after a considerable time, and only in a few of them had the anchored kidney again become movable.

CARAMEL AS A NUTRIENT FOR DIABETICS

E. Graefe, of the Medical Clinic at Heidelberg, suggests caramel as an article of diet for diabetic patients (*Muench. Med. Woch.*, 1914, p. 1434), he having found it not to increase to any extent the excretion of sugar, while generally leading to an amelioration of the acidosis; thus providing a useful and acceptable source of considerable calories of carbohydrate origin, even in the gravest cases. In the latter, the daily ration is set at from 100 to 200 Grams, after the directions for Noorden's oatmeal-cure; otherwise, in conjunction with garden vegetables, carbohydrates, fat, and albumen.

While such a caramel, palatable and almost free from sugar, is commercially supplied (Doctor Graefe mentions E. Merck), it may be prepared, best, from grape-sugar, by heating it, dry, in an aluminum pan or capsule at between 140° and 150° C., until properly converted. This, though, we may add, is a somewhat difficult task for an uninitiated person, it being the easiest thing to get a bitter, overheated product.

SALVARSAN IN SCARLATINA

Excellent results are reported by Lenzmann, of the Diakonissen Krankenhaus at Duisburg (*Ther. d. Gegenw.*, 1914, p. 243), from the use of neosalvarsan in 47 cases of scarlet-fever; only 2 of the patients succumbing; one from streptococcus sepsis, the other having arrived in a comatose state severely sick with the fulminant form. In 2 of the patients, otitis of the middle-ear occurred. Otherwise, there occurred not a single instance of nephritis, recurrent lymphadenitis, suppuration or rheumatoid troubles. Neither were any untoward side-effects observed. The beneficial influence soon was evidenced in amelioration of the faucial troubles, a step-like recession of temperature, and improvement of the general condition.

When practicable, the neosalvarsan was administered intravenously; otherwise, intramuscularly. Children between the ages of 3 and 8 years received 0.15 Gram as the largest single dose; those between 8 and 15 were given 0.3 Gram; and the maximum single dose was (in rare cases) 0.45 Gram. However, even for adults the initial dose best is started at 0.15 Gram, and it should be proportionately small for children.

If the first (very small) dose does not induce vomiting, diarrhea, rise of temperature or general disturbance, then a second, slightly larger, dose is injected; and this dose repeated a few times, as may be indicated. Every fresh access of fever is to be combated with another injection of the neosalvarsan. Only very rarely was Lenzmann obliged to give more than a total of 0.8 Gram, in the case of grownups.

TREATMENT OF SCARLATINA WITH CONVALESCENT SERUM

Doctor Lenzmann, in his report on the value of neosalvarsan in scarlatina, having touched, somewhat negatively, upon the benefits derived from convalescent serum (see citation above), a commentator, R. Koch, of Frankfurt a. M., briefly adduces the following facts (*Ther. Monatsh.*, 1914, p. 591):

The reason why Lenzmann failed to get best results from the serum-therapy is, that he did not follow more closely the method as

previously developed by Reiss, Jungmann, and himself (Koch), by which all three had accomplished far more than did the former with salvarsan. Contrary to Lenzmann—who thinks it might prove useful as an adjunct—it is exactly in the most critical cases, which the speaker pronounced beyond medical aid, that convalescent serum had effected cures. As to the suggestion that equivalent results might be attained with normal human serum, his own experience went to prove a greatly superior efficacy of the convalescent serum in scarlatina gravissima.

MINERAL OIL TREATMENT OF GASTRO-INTESTINAL ULCERS

Our good friend, Dr. A. L. Benedict, who contributes so frequently to CLINICAL MEDICINE, offers an excellent suggestion for the treatment of ulcers of the stomach or bowels in *The American Journal of Gastroenterology* for April, 1914. For several years he has been using pure paraffin oil, ordering the administration of one-half ounce three hours after meals and late in the evening. Bismuth in some form is generally emulsified with the oil, and camphor, phenyl salicylate, menthol, and other remedies may be mixed with or dissolved in this menstruum, as indicated.

The mineral oil probably acts as a protective lubricant, and as a base for distributing the bismuth or other contained drug over the lesions. It also seems to be negatively antiseptic. This remedy has been used with good results, not only in the treatment of gastric and duodenal ulcer, but also for malignant ulcers of the intestine, in which conditions it seems to arrest the development of the disease sometimes for a very long period.

TREATMENT OF MORPHINE ADDICTION

Already a demand for intelligent help in the treatment of drug addiction is beginning to reach us. The article by Doctor Waugh, on another page, will answer most of the questions asked, but we are sure that suggestions of all kinds will prove helpful. For this reason, we print herewith the formula used in the Chicago House of Correction and the emergency hospitals of this city, which during fifteen years have been called upon to treat more than 3000 cases of narcotic drug addiction. The method of treatment is reported to *The Journal of the American Medical Association*, by Dr. Charles E. Sceleth. (See the number of March 13, 1915, p. 927.)

Doctor Sceleth says that when patients enter the hospital they are given a preparatory dose of a saline cathartic. The basis of the medical treatment is the following:

Scopolamine hydrobromide	gr. 1-100
Pilocarpine hydrobromate	gr. 1-12
Ethyl-morphine hydrochloride (dionin)	gr. 1-2
Fluid extract cascara sagrada	min. 15
Alcohol	min. 35
Water, q. s. ad	dr. 1

The dose is varied according to the extent of the addiction. Patients vary in their daily consumption of morphine from 1 or 2 grains to as many as 60 or 90 grains a day of morphine. When more than 10 grains of morphine per day are being taken, 60 minims of the above mixture is given every three hours day and night for six days. On the seventh day the dosage is reduced to 30 minims, the eighth 15 minims, and on the ninth 15 minims three times a day instead of every three hours day and night. On the tenth day the mixture is discontinued and strychnine nitrate, 1-30 grain, three times a day, is used. On the eleventh day strychnine nitrate, 1-60 grain, is given, and this is continued for a week. During the first five days only light diet is given, but patients are encouraged to take liquids freely.

If a patient is using less than 10 grains of morphine a day, the dose should be 30 minims of the mixture to begin with. If he is using less than 5 grains, 15 minims is used as a starting dose. During the first three days the patients suffer from insomnia, and in about 10 percent of the cases vomiting; this is to be expected. If the pulse goes below 40 or over 120, the mixture is stopped for a single dose. If there is collapse, 1-2 grain of ethyl morphine hydrochloride or 1-4 grain morphine is given hypodermically. In about four percent of the cases a scopolamine delirium may develop. In such instances the mixture should be given without scopolamine for two doses, and then continue with scopolamine in 1-200-grain doses.

During the treatment no other drugs should be used. After the fifth day the patients will have no further desire for morphine. Up to this time they care very little for food, but after the fifth day they develop a ravenous appetite and will gain weight rapidly. Extremely emaciated patients will gain a pound a day for the first thirty days.

Doctor Sceleth declares that the results obtained by this method have been found

efficient; in fact, the results are more lasting and, all things considered, more satisfactory than from the Lambert-Towns treatment. The patient should be directly under the physician's care, but after eleven days, the strychnine treatment of seven days may be safely intrusted to the patient.

We would suggest that the active-principle remedies in this formula could be given with more safety and satisfaction in granule form than in the anything-but-pleasant fluid mixture advised. Hyoscine hydrobromide may be substituted for scopolamine.

TYPHOID VACCINATION IN THE BRITISH ARMY

From a newspaper report of an address given by Sir Frederick Treves before the Royal Society of Arts, we learn that since the beginning of the European war, there have been only 212 cases of typhoid fever in the British expeditionary force, and of these 173 cases occurred among persons who had not been inoculated against the disease. Thus far there have been but 22 deaths from typhoid, and in not one of these cases had the patient been vaccinated. Thus far not a single death in the expeditionary force of the army has occurred among inoculated individuals.

AN EMBALMING FLUID, AND HOW TO USE IT

We have had several inquiries for a satisfactory embalming fluid, with directions for use. We print herewith a formula devised by workers in the Hygienic Laboratory of the United States Public Health Service, and now much used in different branches of the Government for embalming on shipboard. The composition of this fluid is described by Dr. Edward Francis, of the Public Health Service, in an article published in the February, 1915, number of *The Military Surgeon* (p. 161). The formula follows:

Formalin (40 percent formaldehyde)	Cc. 12.5
Borax (sodium borate, $Na_2B_4O_7$)	Gms. 5.0
Water sufficient to make	Cc. 100.0

NOTE.—Should the strength of the formalin be below 40 percent, its amount must be proportionately increased, using, for example, 15 Cc. of formalin of only 33 1-3 percent strength.

This preparation has been found stable in composition after standing two years and eight months, and effective in preserving human subjects exposed for two months to a temperature of 98° F.

Formaldehyde is undoubtedly the best preservative and disinfectant, and it is the essential ingredient in nearly all commercial fluids. One serious objection to its use is that it bleaches muscular tissue to an ashy gray. The investigators of the Hygienic Laboratory found that this result could be overcome by adding an alkali, but in the selection of the proper alkali it was learned that most of them cause deterioration of the formaldehyde after several weeks' standing. Fortunately borax supplies the desired alkalinity without producing more than the slightest deterioration of the formaldehyde, even after having been made up for nearly three years. Borax also has the advantage of being in itself a preservative.

This embalming fluid is injected into the arterial system in quantity equal to 15 percent of the body weight, as follows:

Inject each femoral artery toward toes with	2 percent body weight
Inject each brachial artery toward fingers with	1 percent body weight
Inject one common carotid artery toward head with	2 percent body weight
Inject same common carotid artery toward heart with	7 percent body weight
Total amount of fluid	15 percent body weight

It is not necessary to withdraw blood from the veins before injecting the fluid, although there is no objection to so doing; nor is it necessary to inject fluid into the thoracic and abdominal cavities. Autopsied bodies are to be treated the same way as others, with the addition of a liberal amount of cotton and embalming fluid to the cavities of the abdomen, chest, and skull. Plug the anus, mouth and nostrils with cotton soaked in the embalming fluid. Wash the entire body, including the face, ears, and hair with the solution. If it is desired to keep the body for a long time, drying can be prevented by the application of vaseline and bandaging.

NOCTURNAL ENURESIS IN CHILDREN

A disagreeable concomitant symptom in several cases of nocturnal enuresis observed by Dr. C. W. Crawshaw and reported in *The Lancet* for May 30, 1914, was excessive blinking of the eyelids. In two cases this symptom disappeared in a few days after the author began the administration of a thyroid preparation in conjunction with calcium lactophosphate.

Miscellaneous Articles

On the Firing-Line

THERE is something intensely dramatic in going up and down the line of the trenches, calling at the receiving hospitals, which are from two to five miles apart, and sometimes more, and looking over the methods and means of taking care of the poor wounded boys and sending them to the rear.

As the days go by, one is immensely impressed with the perfection of the system. The wounded are picked up at night and carried to the receiving hospital, mostly by motors, and from there are distributed to the rear with an accuracy entirely unknown in any previous war.

Every now and then there is evidence of a coming night assault. The air-men and the shots on that particular part of the line are unmistakable indications that a charge will be made.

We in the rear get this information by 'phone, and the ambulance-corps of motors and the receiving hospital at that neighborhood make active preparations for what they know will certainly happen. After dark or sometime in the night, a wild, desultory roar of magazine-guns will be heard, and we know the trenches have been assaulted.

Sometimes these charges are repulsed. Then, again, the enemy drives the men in the trenches back, and in a very short time a new force of men is hurried up, and the trenches are retaken. Then comes a lull, and the Red Cross surgeons and stretcher-bearers go out to gather up the wounded. Sometimes the lines are so close together that continual sniping occurs, that is, sharp-shooting, and there is great danger in picking up the fallen men. Usually, after dark, men can be quickly gathered up on stretchers or in the arms of assistants and carried back a few hundred yards, where the Red Cross surgeon, provided with a flashlight, determines what should be done; then the motor ambulances carry the wounded back a mile or so to the receiving hospital.

All this is of daily occurrence. Along the line of about thirty miles, under my direction, charges and countercharges are taking place every night. The surgeons and stretcher-bearers have little or no time to rest except during the day, from ten on to four or five in the afternoon. Sometimes every night, for a certain period, there is a call for every surgeon on the whole line, and they must be prepared for anything that comes.

The frozen ground and snow make it possible to go about very easily, although the cold is intense at times and men suffer intensely. It will occur to the reader that the work of the Red Cross surgeon, or the man on the firing-line, requires a certain adaptability that is not very common. A young man may be very learned in many things and, yet, show very bad judgment as to the first aid he gives to the wounded.

Where the wounds are very severe, the surgeon is ordered to pin his number on the coat of the wounded man. This is noted when the latter reaches the receiving hospital; then, if the surgeon has neglected something he should have done, the supervisor in the hospital will reprove him with great severity.

Where the work must be done instantly and there is no time for consultation, the language must be brief, exact, and to the point. Oaths and expletives are far more common than soft words. After a while, a blundering doctor is sent to the rear or often he asks to be relieved. A surgeon who has had several very narrow escapes from injury and death sometimes becomes demoralized and shows a degree of cowardice that renders him incapable.

Incidents like the following are not uncommon. Where the lines have been assaulted and forced back and desperate efforts made to retake them by flanking and the use of machine-guns, there will come word to the surgeon that some officer is lying out in the firing-zone, wounded. Someone has seen him, and the man has begged for help. The surgeon appeals to the stretcher-bearers and anyone present to take the risk of bringing him

in, and even the surgeon himself will take the risk of getting killed in his efforts to help. As a rule, on these occasions, great courage is shown, and many a poor fellow has been brought in at the risk of two or three lives. Most of the officers on the firing-line are captains, colonels, and from that down. Many of them are very brave men and for hours will lie wounded on the field without murmuring. The dread is not of the dying, but of being captured.

There is really wonderful system developing along the lines, and every day becomes more and more perfected. The field-surgeon himself becomes very expert; many of the first dressings are not removed at the receiving hospital, but are retained until the patient reaches the great central hospitals at Boulogne.

This end of the line is within ten or fifteen hours' ride of the great central hospital, and the railway transportation is very perfect and uniform. After a dose of morphine and some food, the patient is put on a railway train, and sleeps profoundly until he reaches the central hospital.

Although the weather is cold, sometimes very heavy snow, sleet and rain, the greatest sufferers are in the trenches, where the water settles and where the chance of being injured by frost is very great. This danger is overcome to a large degree by the kitchen-motors that go around as often as they can.

One observes great difference in the fatalities at different points. Where the lines are in close proximity and the assaults are frequent, there are occasions of very low mortality and injuries. At one point on the line, for over a week the Germans made tremendous efforts to break through. They succeeded in taking the trenches, but the next night were driven back. Then in the daytime fierce cannonading followed.

During that week, the mortality was very low. The surgeons and the receiving hospitals had very little to do, although great preparations had been made, supposing there would be very serious casualties. Finally the effort subsided and the Germans were driven back several miles, and a lull has taken place at that point since then.

A few miles farther off, another attempt was made, and the casualties and deaths were frightful. Two receiving hospitals were brought up, and the wounded were very large in numbers.

The gunshot and contused wounds from fragments of balls are very severe. There was much speculation as to why this should be so, and no one could give a reasonable theory.

Many new regiments are coming into service, and it is noticed that the old veterans are kept close in the rear, so that in case of difficulty they can be called upon. There is something depressing in the continual assaults, capturing, and being driven out of the trenches and then retaking them. So little seems to be accomplished, and, from the surgeon's point of view, there seems to be a greater perfection of details and exactness like the movements of the machine. The cannons are firing all the time; when the air is clear, their aim is very exact, when it is cloudy, it is otherwise. The trenches are near each other, and the sniping of every person who is exposed seems more like murder than real warfare.

In the meantime, the country is being devastated. Houses, fences, barns, and everything along the line are all in ruins. On the line that I am watching, there is not a village that is occupied, except by soldiers and persons attached to the army. The inhabitants are all gone.

What we, as surgeons, learn here is, sharp, instant diagnosis and prognosis, and how to apply the best means for the time and occasion. This must be made at all times and under all circumstances with exactness and accuracy, and then we must make disposition of the patient at once.

We have no time to make records, except the briefest notes, so that in the future knowledge of the work must be largely a matter of memory. In the field hospital, something more must be done; but here the records are meager.

The motor ambulances are a very large element in the success of this work. This new war brings new conditions to be met, with new means and measures to be applied.

"BRITON."

EMETINE HYDROCHLORIDE — WHERE SHALL I INJECT IT?

I have found that by injecting a solution of emetine hydrochloride beneath the mucous membrane of the mouth at about the junction of the muscles of the cheek with the maxillary ridge, and about on a line with the first molar tooth, where the tissues are loose and flabby, I can introduce the remedy without producing any strain on the tissues. Thus introduced, the emetime produces no irritation and there are no after-effects, while the pain is much

less than when it is injected into the arm or beneath the skin at other points.

There are four excellent points in the mouth for the introduction of this solution; namely, the tissues of the superior and inferior maxillary on each side, so that consecutive injections never have to be introduced at the same point.

Again I want to say that when this site is used, there is no reaction and absolutely no irritation.

A. C. Cook.

Georgetown, Ky.

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[There is occasionally some irritation at the point of injection when emetine hydrochloride is given subcutaneously. This is not a constant result, some patients apparently suffering no inconvenience worth mentioning; yet once in a while it is quite troublesome. As we have pointed out, discomfort can often be avoided by injecting the alkaloid first into one arm, then into the other. At any rate, Doctor Cook's novel suggestion is worthy of careful investigation. We suggest, however, that great care be taken until familiarity with the method is acquired. Begin with a very small amount of the solution, introduce it with caution, and watch results. Then report. One of the members of our staff tried injecting the emetine solution into the mouth in the locality advised by Doctor Cook, and in his case it caused quite severe pain persisting for about an hour. He doesn't favor the method! We are extremely anxious to know of the experience of other physicians with the method.—Ed.]

AN EXPERIENCE WITH EMETINE IN HEMORRHAGE

Since emetine hydrochloride is occupying such a prominent role in the treatment of so many conditions, I wish to add my latest experience with it, this time in controlling hemorrhage.

A little girl was knocked down and run over by an automobile, the front wheel passing diagonally across her face, causing profuse hemorrhage from one ear and the nose. I tried the usual remedies for stopping the bleeding, but after four hours had not succeeded in controlling the hemorrhage from the ear. I decided to try emetine. One injection of 1-3 grain of the hydrochloride put a stop to the bleeding within a few minutes. I have had no further trouble with the case, except in relieving the bruising and soreness.

Acting upon the suggestion made by someone in the March number of Clinical Medicine, I am trying this remedy out in a case of psoriasis of several years' duration. If the results are good, I will report the case later.

E. M. Murphey.

Macon, Miss.

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[We hope none of our readers will lose sight of the value of emetine in arresting hemorrhage simply because it has come so strikingly into the foreground as a remedy for pyorrhea. The alkaloid seems to have the power of checking loss of blood from almost any site. Dentists are already beginning to use it in hemorrhage following the extraction of teeth, and we even hear that French army surgeons are employing it in cases of internal hemorrhage following perforating wounds of the chest.

I sincerely hope that Doctor Murphey will keep his promise and let us know how that case of psoriasis comes out. So far, the only report of experience with the drug in treating this disease comes from a Savannah (Georgia) dentist, who apparently effected a complete cure of a case of psoriasis through local treatment of a coexisting pyorrhea. The results were so brilliant in this instance that we are anxious to hear from others. We hope that many of our readers will report.—Ed.]

SCIATICA—A COMMENT

Replying briefly to the editor's comment upon my article on page 275 of the March number of Clinical Medicine, I want to add that the pain produced by hypodermic injection, properly given, is usually very slight. My patients prefer the pain of the needle to that of the disease, saying that it gives great relief to the sciatic pain.

I always give a laxative. On page 275 you will notice that I mention giving such preparations.

F. E. Hufnail.

Minneapolis, Minn.

SOMETHING MORE FROM THE SUNNY SOUTH

Our doctors' exchange seems to be growing in favor. The latest accession to the list of exchangers is Dr. T. C. Murphy of Pass Christian, Mississippi, who offers soft-shell pecans, grape-fruit, Satsuma oranges, and ribbon-cane syrup.

Any doctor who is interested in any one of these eatables should communicate with Doctor Murphy.

WILD-GROWING HERBS FOR SPRING SALADS

While dandelion shoots and pepper-grass are used all over the country as cheap and delicious salads, as a grateful and wholesome addition to the menu after the dreary winter season, a lady correspondent of *The Record-Herald* (Chicago) calls timely attention to a number of other plentiful herbs of the field suitable for the same purpose. Inasmuch as the family doctor also is looked upon as a family adviser, he can add to his popularity by spreading this useful information, while doing a philanthropic service in the case of those families who are obliged to husband their meagre resources rigidly. For their sake particularly we repeat here the salient points of the letter in question.

There are, this good housewife says, few persons who have knowledge of the splendid salad-plants that grow right at the doorway and may be had for the picking.

First of all, the common dandelion yields one of the most delicious salads when the first young leaves make their appearance. A sharp-pointed knife should be used to lift the plantlet with its roots from the ground. The plant is then washed and scraped and the outside leaves are clipped off, leaving a fine feathery foliage with a white root, tender and delicious. When the dandelions become a dark-green, they are unfit for salad, but may be used as table-greens. When the leaves of the growing plants are just turning, they may be covered over with a board for two days, when they will become bleached.

Plantain, considered weeds, when young makes a splendid salad, and may be bleached the same as the dandelion. The young sprouts of pigweed or lamb's quarters are a desirable addition to the salad-bowl. So, also, the curly and the broad-leaved dock and sour-grass form a delicious salad used either alone or mixed with some other green plant. The young shoots of the milkweed, when not more than four or five inches high, tied in bundles and cooked like asparagus and served with French dressing, will yield a salad fit for any epicure. The young shoots of the primrose also are good cooked this way, making, when mixed with the milkweed, a fine combination. Fetticus is found in all cultivated fields. Then there are cowslips—the tender shoots of the star of bethlehem—and the better-known pepper-grass, mustard, as well as beet tops; all of which are good for salads, and a French dressing holds good for them all.

This information comes at the right time to be of value, and doctors should be able to add to it, from personal knowledge of their own local flora. It is well to give this knowledge to the good housewives, to bear in mind.

WHAT DO YOU REALLY KNOW?

If you had asked a doctor fifty years ago what he knew, he would have answered, "I know that blood-letting is the best treatment for inflammation." And he thought he knew. Yesterday, in a conversation with me, an old sage made the assertion that no one except a demented old woman would tell you that the birth of Jesus was in any way different from other children's births. This sage, too, is positive that he knows.

If you review your past years, you must acknowledge that much that once was knowledge to you was a mistake of ignorance, that you have had to unlearn much that you once "knew" to be so. The question, then, arises, What does any man know? You will answer, "Much is known, and is demonstrable." You answer further, saying, "I can take you into my laboratory and demonstrate to you that certain germs are the cause of certain well-known diseases."

But, suppose you do demonstrate to me that certain things are facts, does that prove that they actually are facts or does it only show that you have convinced me? I may be exceedingly credulous and may be made to believe much that is not true. The educated world might be a unit on a certain proposition today, yet, tomorrow the whole thing prove a farce.

I ask you what do you know, and are you sure that your supposed knowledge is founded upon unchangeable facts? Do you not find yourself running up against your most sacred ideas and discover them only to be creations of the imagination? And do you wonder that the most learned tell you that they do not know anything, that they are only beginning to find out a few things?

Does it discourage you when you realize that your past experience is only a web of cruel uncertainties? And do you exclaim with Solomon, the wise man, that "all is vanity and vexation of spirit?" This sage said, "Get wisdom," and tried to tell us the

value thereof. You have spent years in trying to get wisdom, and what is the result? Your friends laugh at you when you try to tell them what you know. They say, "Poor old man, he is in his dotage and does not know anything." Are they right or are they wrong, and who is to be the judge? And of what value is the opinion of the judge after he has pronounced you ignorant or wise? Does the judge know?

One time I wrote an article entitled, "Plausible Guesses," in which I acknowledged that most of my views were founded upon the plausible guesses of my predecessors and that, if their guesses were correct, mine might be, too.

It is very fashionable to judge and condemn the seemingly ignorant. You often hear it said that this or that individual "ought to be put in the asylum." The self-appointed judge does not mean harm to the victim, he only is trying to diffuse his knowledge. The same measure might have been suggested in the case of the self-appointed judge himself—and should only a part of suggestions of this kind be put into effect, there would be "something doing" in the way of building asylums.

If I were asked to answer my own question, I should say that I am not positively certain about how much or how little I know—most probably not much.

W. P. HOWLE.

Charleston, Mo.

NAPOLEON'S ACTIVITY AND HABITS DURING THE CAMPAIGN OF 1813

The following narration is taken to some extent from a memoir of Major von Odeleben, who belonged to Napoleon's staff during the campaign of 1813. It is not directly on medical topics, but nevertheless of medical interest in so far as it demonstrates the extraordinary, almost supernatural working-power of that great man.

The most important part of Napoleon's headquarters was the cabinet in which he and his secretaries were working; it was the largest and the most suitable room in the building. When the emperor remained with his troop in bivouac, a tent, adjoining the one in which he was living and receiving, was erected to serve as cabinet, the one in a building as well as that in a tent had the most exact arrangements. In the middle stood a large table upon which the map of the seat of war was spread. On this map were sticking many pins with heads of different colors, to designate the positions of his different army corps and of those of the enemy. The pins were placed by the chief of the topographic bureau, who had to work with the Emperor incessantly, and who was best informed of the positions. When the map was not in place at Napoleon's arrival, it had to be brought immediately, for it seemed to be more important to him than all the other things. During the night this map was illuminated by twenty or thirty candles. When Napoleon was riding on horseback, Caulaincourt had a map fastened to his chest. He was always nearest, to present it at the word "*La carte.*"

In the four corners of the sanctum were placed small tables for the secretaries. As a rule, Napoleon dictated to them, fully dressed in his ordinary green uniform, often with his hat on, walking up and down. Accustomed to see everything that came to his mind executed with the greatest celerity, nobody could write fast enough for him. His secretaries, therefore, had to invent a kind of stenography.

"It is incredible," says von Odeleben, "how fast Napoleon spoke when dictating, and what perfection his sceretaries had attained in this cipher writing."

Odeleben also gives us a very detailed description of how many and how manifold things of greatest importance were attended to, how many important orders were given, and how hard a day's work the secretaries had, acting as telegraph wires for the sparks coming from Napoleon's ever acting brain. He gives the arrangements made for audiences. Sometimes painful suspense reigned in headquarters, a significant silence, when the Emperor was in ill humor or a storm of such was threatening.

The transportation of the most indispensable vehicles was entrusted to two *chasseurs à cheval* of the imperial guard. These were called *chasseurs de portefeuille*, appointed to their posts of honor by the Emperor's adjutant. They had to follow closely the train when the Emperor rode in carriage or on horseback. The keys of the wallets were in the hands of Caulaincourt. When these couriers came in sight with their wallets, while the Emperor was riding in carriage, Caulaincourt dismounted, took the dispatches and handed what was the Emperor's to the Emperor. Very soon a shower of envelopes flew out of the wagon. Papers which had not yet been read in the cabinet were placed in drawers or pockets arranged for this purpose in the carriage. Napoleon read them

while riding, and what was not to be conserved was cut to pieces and thrown out the window. When no reports had arrived, the drawers and pockets were stuffed with Parisian journals, which were superficially looked over and then thrown out of the window; the same happened with novels for which the Emperor did not care after having read a few pages. Those following the train had opportunity to collect a little library.

The zeal of the restless soul, rejoicing in changeable impetuosity of a constant occupation with war, excluded all observation of regular hours. All that happened in headquarters came unexpectedly, but everybody had to be ready at the moment. Unforeseen times of rest, of departure, changes of routes and quarters followed each other. The transactions in audiences, the incoming reports, the arrival of couriers were the clock by which the time was divided.

All important plans for operations were made by Napoleon alone. Berthier was entrusted with the execution of the commands. When the last word had been dictated in the cabinet, Berthier would dryly say, "*La voiture! a cheval*," and as by electricity, all who had to follow him came into motion. Only at this moment they learned what road was to be taken. The grand equerry (Caulaincourt) rode on the right side, General Guyot on the left of the carriage, the adjutants on duty, equerries, officers, pages, a couple of horses, one each for Napoleon and for Berthier, the latter being in the carriage with Napoleon, Rustan, the *chausseurs de portefeuille*, a guard of chasseurs—one officer and twenty-four riders—this was the train which always was following the Emperor, and was arranged with great exactness.

The cavalcade went on in sharp trot, like a storm, day and night, many miles; and who had to follow during the night in this whirlwind had no enviable lot, having to risk limb and life. As soon as Napoleon commanded "Halt," his and Berthier's horses had to be ready, four of the chasseurs of the front rank dismounted, formed a square around the Emperor and stood at shoulder-arms.

The same was done when he was on foot to inspect the vicinity and the enemy's position, only the square formed by the four chasseurs was then wider, so that he could observe in all directions. When the object was distant, one of the pages carrying a large telescope advanced and he or sometimes Caulaincourt lent the shoulders as basis for the telescope. When circumstances obliged Napoleon to remain for some time during cool weather in the open air, an immensely large camp fire was made for him by the chasseurs. They took the largest pieces of wood, whole beams or trees for the fire which was to indicate the Emperor's presence.

When at table, only Berthier would be with him, seldom others. All stood respectfully at some distance, forming a semicircle; or the generals had lit a maréchal's fire, as they had set a maréchal's table. In profound meditation or in conversation with Berthier, the Emperor would walk up and down, listening to the cannon in the distance or to other signs from his generals. When time seemed long to him, he snuffed tobacco, exercised his feet, threw pebbles or threw wood into the fire. He never could remain idle.

The restlessness of the Emperor kept everyone, the highest and the humblest, in excitement. With incredible facility, quick conception, he mastered the subjects of his dictation, dictating often for hours in succession, and his secretaries and adjutants spoke with admiration of the thoughtful, systematic and correct construction of his delivery.

When, while on the march, a courier came near, either Caulaincourt or Berthier had at once to sit on the ground to write down Napoleon's orders for the corps commanders. Sometimes almost all the officers of his staff were sent out. When expecting news from his generals, especially of an engagement, he was in great anxiety; in the middle of the night he would shout "*que tout le monde s'eveille*," and one or more cabinet members had to rise. This was generally at one or two o'clock after midnight.

During the campaign Napoleon used to retire early, soon after 8 or 9 o'clock, or as soon as he had finished supper. The camp-bed was taken along on mules. Very seldom did he sleep for an hour in daytime; when this happened, it was after exhaustion in bivouac or after sleepless nights. The longest time he slept during the campaign of 1813 was once in Goerlitz, after the stipulation of the armistice of Neumarkt, namely, ten hours in uninterrupted succession, from 9 in the evening until 7 in the morning—an almost unheard-of event, as the servants gave assurance, and a sign that he was then for a short time free from sorrow.

Very often Caulaincourt had to work with him during the greater part of the night. Occasionally Napoleon would dictate from

2 to 4 in the morning and then lie down again. Often he was working all night long. Rustan had to bring him coffee. He promenaded in the well-lighted cabinet, dressed in a white gown and with a multicolored silk turban on the head, while he was conversing and dictating.

The traveling-carriage had sleeping-arrangements, so that he could stretch himself on the mattress and sleep as comfortably as in bed. Napoleon always was in uniform; during the night, however, he wore the turban. A lantern on the posterior wall lighted the interior of the carriage, four other lanterns on the four corners of the outside of the carriage lighted the road. Rustan generally was alone on the box. Six strong horses, led by two riders, drew the unostentatious green, two-seated vehicle hanging on the best of springs.

Napoleon's uniform, green with red collar and the star of the legion of honor, is so well known from pictures and paintings that it might be superfluous to describe it here. On cool and rainy days, he wore the world-known gray overcoat; on his birthday, he appeared at the dress-parade in the grand uniform of his guards—blue and red, with golden embroidery.

He had about eight or nine horses for his own use. The noblest and best of them was an Arabian cream-colored mare with black tail and black name. Napoleon's equestrianship has often been criticised. He rode at easy pace or at short trot, meditating while on horseback, and found special pleasure in riding over side- or footpaths, sometimes across the field, when no one could guess where-to. Sometimes he came thus, in mountainous regions, upon abysses, where he had to dismount. He disliked to be warned of obstacles or difficulties. Sarcastically smiling he would say, *"On ne peut pas?"* and generally did not desist until he had convinced himself that it could not be done.

Places which he disliked or hated, because they reminded him of some loss, he would pass by at fastest hunting-pace. Von Odeleeben noticed this on the retreat through Haynau, where a battalion of Ney's had been annihilated; at Markersdorf, where Duroc had fallen; at Reichenbach; and near the socalled Saxon Rider, between Bischofswerda and Bantzen, where a French train with ammunition of more than 70 wagons—which was of the greatest importance to the army—had been surprised by Cossacks and exploded. It could plainly be seen how depressed Napoleon felt while passing this road. A little dog happened to bark at his horse. This made Napoleon furious; he drew his pistol to shoot the dog, but the weapon missed fire, and in his anger he threw it away. Rustan hastened to pick up the pistol and put it in order again. All this went on in fast gallop; not a word was spoken.

Sometimes Napoleon's face was cheerful and while on the march he even would sing some Italian words. He also would then converse with the Prince of Neufchâtel or some other maréchal, or with Prince Eugene. While he was in good humor, his voice had something pleasing and confidential. He would call with familiarity, "Berthier" or "Grand Mortier" (Mortier was of high stature); but he adopted another tone when they were on duty, then he called "le Prince de Neufchâtel" or "le Duc de Trevise."

A. ROSE.

New York.

[This fascinating description of Napoleon is collated by Doctor Rose from his book, "Napoleon's Campaign in Russia in 1812," which we commend to everyone interested in "The Little Corporal."—ED.]

THE WAR-DISEASE, AND ITS PREVENTION

The trained medical mind, especially if it is in love with psychology, looks upon war as a disease. As such, its causes are as well known and as easily avoided as are the causes of yellow-fever or any other disease. Just at this time our political doctors as well as our medical practitioners, scientists, philosophers, and all true statesmen are studying this disease. It is well; for the present war in Europe is certainly the most unreasonable and inexcusable of any in the history of the world.

The socialist view, however, is optimistic rather than pessimistic, because we study war from the evolutionary standpoint. The class struggle, natural selection, survival of the fittest, materialistic conception of history, and the law of surplus value are some of the many factors we adduce to solve the problem. These are quite different from those considered by any other class of diagnosticians. In the evolution of industry, it is as certain that cooperation (i. e., socialism) must follow competition (i. e., capitalism), as it is that the latter followed feudalism, which in its turn succeeded barbarism. Each is a logical development from its predecessor. Each is

formed out of an integration of human units resulting from the disintegration of its antecedent, and parent, organization or state of society.

If I may be pardoned for manufacturing a few words that suit my purpose better than any I can find, I will say that moneyolatry and egoolatry on the part of the few, and partyolatry, ecclesiolatry, and heroolatry on the part of the great mass of the people are the ultimate psychological causes of this barbarous contest. The rapid rise of democracy furnished only the occasion. The facts from the history and customs of the nations engaged in deadly fratricidal combat prove this. In the evolution of socialism (i. e., the collective ownership and democratic management of all the great natural monopolies used for purposes of exploitation), a conflict with the old order of things was inevitable. But it was the earnest unanimous wish of socialists that it should be bloodless. To this end they worked and voted to the very last. But they were overpowered.

It is safe to say that, had socialism enjoyed even five years more of progress such as had crowned its efforts in the past five years, not a drop of blood would have been spilt in the transition to the cooperative industrial commonwealth. This is evident from the fact that socialism is the only great rapidly growing world-movement that logically reaches and removes all the leading causes of this greatest scourge of all the ages—the hell of war. A study of socialist philosophy will demonstrate this fact to the satisfaction of any honest mind.

Now a study of the economic and political history of our own country brings to light the fact that the same causes that produced the European holocaust are all painfully in evidence here. The symptoms of the dread disease are so numerous and unmistakable that no diagnostician need be misled in locating the malady. An epitome of them was given in the October, 1914, issue of this journal (pp. 922–925); thanks to its broad-minded editors for giving publicity to my views.

Of course, we all say we want no war, but we shall certainly have it if we continue to take the road that leads to it. Capitalism, by permitting the few to monopolize most of the products of labor, together with the land, railroads, mines, machinery, and best-paying industries, thus forcing the masses into poverty and ignorance, necessitates war.

On the contrary, socialism, by keeping all children in school until of age, where they will study the science of complete healthy living, giving every man an equal opportunity to work and the full product of his toil and thus doing away with profit, rent, and interest, removes forever both an idle parasite class and a homeless, hopeless, out-of-work class. Those two classes are outside the mental, and often physical, health zone, and are a menace to any country.

Dr. W. C. Gorgas, at the head of the United States Army Medical Service, the man who made Cuba and Panama fit to live in, said, if he could enforce but one sanitary measure, it would be, to double the wages of the working class. Socialism, then, is the only sure remedy for the disease of war. It will remove its cause. We should democratize war. All should have a chance to vote on it before it is declared.

In conclusion, I wish to correct a few mistakes that appeared in my article above referred to. The statement that $72,000,000 was cleared in the year 1912 by "certain packeries" was questioned by the editor. Their official annual report forms the basis of my statement. In my assertion that 100 families now own half of all our wealth and "largely control the rest," the types made me say "what we call the West." There were several other verbal errors, but they do not alter the sense.

The editor's comment shows that he has not studied socialism from the socialist standpoint, much less the true economic condition of our country. Wherever the first steps in socialism have been tried, as in the Panama Canal, our mail service, free schools, and so on, they have proved successful. All we ask is, a safe extension of this tried principle so that it will embrace the robber-trusts and monopolies.

All the "captains of industry" who really work will be amply rewarded under socialism. The "men of great creative powers" will also find much better scope and reward for their talents than they do now. As to "lack of intelligence and lack of effort" on the part of those out of work, a few weeks' tramping for a job will dispel that idea.

What I have learned in the last few weeks, in my canvass of seven counties for congress on the socialist ticket, fully confirms the position outlined in my article above referred to. Everything is mortgaged to the limit among the farmers. Cotton is selling at 6 to 8 cents. The best hogs bring $7.00 to $8.00 per hundred and bacon costs 38 cents per lb.; and so along the list. Negroes and "dagoes" are chosen to work at our packeries instead of white men. No wonder the country is up

in arms. The promise of $2000 a year for a six-hour day under the socialist régime is based on our last census returns and Carroll D. Wright's 18th Annual Labor Report to Congress.

If it is wrong to help the feeble and the weak and the 4,000,000 to 7,000,000 now out of work to a condition in which they can help themselves and their families, then the Golden Rule is a failure and brotherhood an idle dream. But, the philosophical socialist looks upon the present world-war as being but the labor-pains of Mother Nature in giving birth to a higher civilization, from which will be banished forever the instruments of wholesale murder.

S. J. BROWNSON.

Fort Worth, Tex.

CAPITAL PUNISHMENT — FROM THE STANDPOINT OF A LIFE PRISONER

[The article following is a personal letter and was written the editor by Louis Victor Eytinge, who is serving a life sentence for murder in the Arizona State Prison, at Florence. We have corresponded with Mr. Eytinge for several years, and have already told our readers something about the remarkable work this brilliant man is doing. For several years, although a prisoner, he has been in business for himself, and today he has an income much larger than that of the average professional man. He is an organizer; he can write, as this letter shows; and he is already writing much for the magazines, for pay, although he gives special attention to the preparation of advertising literature, and to the framing of letters that "will pull."

This is but a part of his work. Eytinge's interest in penology is intense, and I know of few men who can discuss the problems of crime and its punishment with such intelligence, and such compelling interest. The letter following is, in the main, a reply to an editorial which appeared in these pages several years ago. I sent him a copy of this and another editorial taking exactly the opposite position; both of these, presenting both sides of the question, were published in the same number of CLINICAL MEDICINE.

I hope every one of our readers will read this article carefully, and I also hope that among our readers will be found some men who will exert what influence they properly can to secure Mr. Eytinge's pardon. He has already been in prison fifteen years, he was convicted on purely circumstantial evidence, he is today a man of character, of brilliant attainments, and he can and will do great things for the good of his fellowmen if he is given the opportunity. He should be free. Will you help make him so?—ED.]

—

Yes, I managed to get here at last; and although there's a mountain of work on either side of this machine, I'm going to try to get something off my chest that has been bursting for expression ever since we opened up on this subject of criminals and criminology.

First, your editorial writer who argued (in your May, 1912, issue) in favor of the utilization of criminals for experimentation has not advanced a new thought. It is old, and if one studies ancient history a bit, we may find that slaves and condemned criminals frequently served as subjects of experimentation. Your correspondent is entirely in the wrong when he says that "life imprisonment has been tried and proven wanting." I boldly challenge the truth of this and assert in absolute contravention that legalized murder has been proven wanting—that it is an incentive to more violence.

Those states having the greatest number of legal executions are also the greatest in lynchings. Thus Georgia in the last 21 years had 216 hangings and 314 lynchings; Texas with 171 hangings also had 235 cases of mob violence. This ratio is continued in the North, so that there can be no claim as to the "negro danger." Look: Colorado in the same time had 16 hangings and 23 lynchings, and Indiana's 18 lynchings show a direct connection with her 14 hangings. On the other hand, Michigan, with not a single legal hanging, had but two cases of mob murder. Wisconsin, also without any legal hangings, had but two lynchings. These two northern states, both states with a rough population in their mining and lumber camps, had but four cases of lynching, while Ohio, Indiana and Colorado with double the population had 83 legal executions and 65 lynchings. Is there any connection?

California and Wisconsin have about the same population—both have a peculiarly agricultural community. California uses the noose; Wisconsin uses life sentence, and in the year 1910, as well as the years 1908, 1909, 1911 and 1912, there were six times as many murders in California as in Wisconsin. But objection may be made because of geographical difference. Let's go back to our closely-related states of Ohio, Wisconsin and Michigan. Ohio has twice as many murders in

proportion to population as these other states without the death penalty. Ohio in twelve years has averaged one murder conviction to every 56,000. Why? *Why?* WHY?

Your editorial writer says his proposition will be opposed by sentimentalists. Leaving aside the possible answer that sentiment is the noblest, purest, strongest, and most elevating influence in life—leaving aside those things, I want to say most emphatically that I do not oppose his proposition with any sentimental argument. I fight with figures that are black with facts. I fight for efficiency rather than theory. I have been a student of prisons and criminals for over fifteen years. I know what I know through personal contact with thousands of prisoners from the inside and from an earnest study of this subject from its scientific sides.

Let me quote the most famous executioner of the world, Monsieur Deibler, for scores of years the official French executioner. In his book you'll read that he asserts that for every legal execution he has handled he has seen, *as a consequence*, repetitions of the exact crime for which he beheaded some criminal just before. Pestallozzi gives an instance of four women who killed their infants, illegal children, after seeing another girl executed for the same crime! Is it not true that in times of war—even now, with Europe in war—murder increases, and that assaults and combats increase, all because of the firing of the blood lust in humans through knowledge of other blood lusts? Is this not true? Then, how may we say that legal blood-spilling, legal neck-breaking, legal murder, does anything toward deterring murder.

Let's take another side of the proposition. I have in my files a symposium of prison wardens on this subject, and over three-fourths of these are against capital punishment. These are not sentimentalists, they are not theorists—they *know!* Let me support my proposition with some matter taken from the greatest French criminologist, Gabrial Tardo. During the first quarter of the 19th century the annual average number of persons guillotined in France was about 120—in the next quarter it had dropped to 40 per annum; from 1850 to 1860 this yearly average dropped to 28. This in turn fell to 10 for the annual average from 1860 to 1879 and then down to 8 during the years ending with 1890, while from 1895 to 1901 but five annually were beheaded. These figures mean nothing unless we show the results of this "sickly sentimentality."

Now listen! Concurrently during these years, watch the falling off in murder trials. In and around the second quarter, say 1835 to be exact, the annual average number of murder trials was 2143, and this was reduced to 879 by 1885. The next ten years, ending 1895, showed an annual average of 439, just half! And this again was cut down to 356 for the ten-year period ending 1900. During the last eleven years 246 culprits were sentenced to death, and of these two-thirds were commuted to life imprisonment, yet despite this "maudlin sympathy for criminals," despite this "sickly sentimentality," the number of homicides kept decreasing! Is not that clear proof that the decrease in legal murder marked a decrease in private murder? Yet your editorial writer desires to first experiment and then inflict the death penalty on condemned prisoners. Does he desire to *increase* homicide in this country?

Let's take a little rest from figures now and bring up something all of us know something about. Every one of us has known of some young child of nine or ten playing around and having a boyish scrap with a playmate and killing him—yes, even planning the killing with boyish deviltry, in revenge for some boyish mischief.

Would any civilized doctor kill his child, if it should be such a boyish murderer? Would he not by parental, superior force deprive him of his liberty, until by lessons of kindness, by lessons that build for manliness and character, he might be led away from the criminal instinct? Is this not what all of us would do?

Now, then, the State is the parent; the murderer is the little son. The State has the power to restrain and teach—but, has it done so? Has it reached that point in civilization when a medical editorial writer proposes, not to restrain and after finding out why the crime was committed, after finding out what physiological deficiencies work the psychological processes that led to the killing, and then cure them, when a medical authority calmly proposes to experiment on the murderer; to cut and slash, and inject, and inspect the murderer to death that some processes in surgery or medicine may be demonstrated, instead of curing the cause for murder? Have we the parental point in our national growth? I should say not!

Your writer further says the "man who is planning murder justly counts on the extreme difficulty of bringing the crime home, * * * and even if convicted and sentenced the chances are so great that after a few

years a pardon can be had, that he may well conclude to take chances."

Has that editor ever talked at length with men under sentence of death—has he ever studied them intimately? If he had, he'd know that the real thoughts of the men were entirely opposite to what he writes. It is true that most murderers—and by these I mean those who deliberately plan their crimes—do not expect to get caught. That, however, is more or less true of every violator of every law, whether he be an abortionist or a married man indulging in a flirtation. No one expects to get caught. And yet, the strangest thing about it all, is the open and well-known fact that no one has ever "beat it." The Law of Compensation, even if man-made law does not, invariably catches up with the offender. That law cannot be evaded.

The murderer, however, does not expect merely "a few years and a pardon." He expects the rope or the chair to end it all and end it quickly. Wasn't that the cry of Johann Schmidt, the priestly slayer of his mistress? Didn't he say, "Oh, well, the chair will soon have it over?"

Now, I've known in my fifteen years of imprisonment, perhaps five score of deliberate, coldly calculating murderers, and perhaps nine hundred of the other kind, their crimes committed under impulse, passions, drink, emotion, and so on. Out of these five score of men perhaps twenty-five were executed, and though quite a few of these weakened in the last moments before death, practically all admitted to me that they were glad it was not a *life sentence*. I've heard dozens of other lifers, for whom there was little or no hope of release, say, many and many a time, that they'd have been better off hung—that if they'd known they were to get a life sentence, they'd not have committed the crime! A life sentence is absolutely the greatest punishment that can be meted out to an offender—at least *in his eyes*. So, then, the life sentence would have been a *real deterrent*.

He then offers, does your writer, *castration* as the ideal penalty for any lesser crime than murder. Delightful—the suggestion—delightful, but unfortunately he seems not to have been aware that castration can not be inflicted on any prisoner in these United States, except as a medical measure for saving life or health. Not as a punishment, anyway. Uncle Sam has a funny Constitution that says something about "no cruel or unusual punishments"—and, if you please, Uncle Sam's Circuit Court of Appeals has just knocked out vasectomy, during this year of 1914. No matter how splendid castration or vasectomy might seem to medical theorists, it won't work with Uncle Sam's people, so let's leave it out of the discussion.

Yesterday I happened to look up a long list of folks who might have been castrated, according to the desires of your editorial contributor: there was John Bunyan, who wrote his immortal "Pilgrim's Progress" in a cell; there was Torquato Tasso, who delivered his epic, "Jerusalem Delivered," from his cell; there was Miguel Cervantes who gave us "Don Quixote" from his cell; there was the world's greatest storysmith, O. Henry, who learned to write in the Ohio Penitentiary. I suppose these and Bill Shakespeare, who was a poacher, would all have been castrated to suit the desires of your editor.

Yes, and where would Australia have been today, if all the convicts, who are the begetters of the greatest families in Australia and New Zealand—if all the convicts were castrated? Seems to me like my studies in history have taught me that many thousands of splendid American patriots were also deported as "criminals," which they may have been. Suppose these, too, had been castrated, where would your editorial friend have been today? Oh joy—isn't it nice to think of our ancestors having been castrated? Then we'd have had no ancestors and we'd not have been! Funny argument, isn't it? But—castration is even funnier.

(*To be continued.*)

DOINGS OF THE SPONDYLOTHERAPISTS

We are in receipt of a copy of the Proceedings of the Third Annual Convention of the American Association for the Study of Spondylotherapy, held in Chicago last September. It makes exceedingly interesting reading, to say the least.

There is no doubt that Doctor Abrams has gotten hold of the real principle, of which our friends the osteopaths have been giving us the dry husks. In other words, just as the psychotherapists have been expounding and utilizing the relations of the brain to voluntary and subconscious functions, so Doctor Abrams has perceived and applied the relations of the spinal column to the involuntary and visceral organs.

We thoroughly agree with him that these relations are undeniable and important, and that they have not been given, in the past,

the attention they deserve. We congratulate Doctor Abrams, and the Association he has founded, upon its worthy efforts to put the subject in a place befitting its scientific importance and its practical helpfulness. They are doing their work well and thoroughly.

THE CURATIVE ACTION OF RADIUM

Once, in the dear dead days of long ago—it seems years ago, but in reality it was only in 1913—before the breach between England and Germany, Dr. Sigmund Saubermann, of Charlottenburg, delivered an address on this subject before the Roentgen Society, of London, in which he reviewed the progress of radium therapy up to that time. Radium Limited, U. S. A., has printed this lecture in pamphlet form, and is distributing it to the profession. Doctor Saubermann, as everyone knows, is one of Europe's foremost authorities on radium emanation therapy, and this booklet embodies the results of his research work for a period of over eleven years. The illustrations, some thirty-five in number, are probably the first of their kind ever shown in this country, and demonstrate clearly the effects of the rays and emanations. The booklet will be sent to any of our readers free upon application to the publishers, 25 West 45th St., New York, mentioning CLINICAL MEDICINE.

WHAT ONE PHYSICIAN THINKS ABOUT THE FEDERAL NARCOTIC LAW

I think the medical profession is under a great debt of gratitude to you for your fearless criticism of the Commissioner of Internal Revenue's interpretation of the Harrison Antinarcotic Law. I honestly believe this law to be the most drastic, puritanical, inquisitorial, and unfair legislative attack upon the medical profession that the reputable physicians of this country have ever been compelled to submit to. It subjects every practicing physician, especially every country doctor, to unnecessary, uncalled for, and trivial regulation, and it is a direct imputation upon his intelligence and honesty.

Let me give a practical illustration. Several nights ago I was called upon in my office to prescribe and treat a patient suffering from intestinal colic. I sent her six pills, each containing 1-64 grain of morphine, with explicit written and oral directions. Now this drastic law, according to the interpretation of the Commissioner of Internal Revenue, requires me to record this act in a "suitable book," giving the name and address of the patient, the date, and the quantity of narcotic administered. I would like to ask any intelligent person why an act requiring my personal attention to prepare and send medicine for a particular patient is not as personal and professional as if I visited this patient and administered to him with my own hands a few of the necessary doses which he requires.

The object of the law is praiseworthy and commendable; but in its application it has been made most drastic and inquisitorial to the medical profession, which is least responsible for the sale of the narcotic drugs, while it is least troublsome and least drastic in its application to those who have been mainly responsible for this traffic.

JOSEPH S. BALDWIN,
Sanitary Officer, 6th District.
Freeland, Md.

[Doctor Baldwin feels strongly, as do many other physicians. However, I think we are all agreed that the law itself is good, and that such a measure was needed to put an end to the improper traffic in habit-forming drugs. While severe, we can all put up with its provisions—must do so!—but it seems hardly fair that the Commissioner should pile so large a share of the burden upon the shoulders of the general practitioner, especially upon those of our craft who dispense their own remedies. The writer confesses to a sense of irritation, but the purpose of the law is so good that he is trying hard to keep this well under control.

The latest regulation (issued since our editorial in this number was prepared) is one permitting dentists, oculists, and other specialists using large quantities of cocaine in office practice to make up stock solutions, keeping a record simply of the date when such solution is prepared and the date of its exhaustion, *without* record of the patients upon whom such solutions are used. All other physicians (meaning average general practitioners) must keep the records of patients, addresses, and dates of dispensing or administration. In other words, those who dispense large quantities of cocaine are partially exempt from the record-requirement; those who dispense small quantities of this drug are not exempt from anything!

These new rulings come so thick and fast that it is difficult to keep in touch with them

all. No wonder the average physician is confused.—ED.]

APPRECIATION FROM A DENTIST

I presume it is hardly customary for a dentist to become a regular reader of a medical journal, but, since I have ben enabled to learn more from CLINICAL MEDICINE concerning pyorrhea than from any dental journal, I have decided to continue my subscription for another year.

I am glad that you are waking up the medical men to the fact that the diseases which we have been trying for many years to overcome are really of some importance, after all. If medical men will cooperate with dental men, a great deal of good will result.

C. R. HOLLISTER, D. D. S.

Manteno, Ill.

ANNOUNCEMENT

Dr. George F. Butler, Medical Director, Mudlavia, Kramer, Indiana, will hold office hours in Chicago, in the Peoples Gas Building, Michigan and Adams, from 2 p. m. to 4 p. m. on the first and third Saturday in each month, for the accommodation of those who desire to consult him personally or who wish special information concerning the Mudlavia treatment. Appointment may be made in advance by addressing Dr. Geo. F. Butler, Medical Director, Mudlavia, Kramer, Indiana.

LOBELINE SULPHATE USED IN CONVULSIONS

My first experience with lobeline I had quite recently, on February 15, in the following case: A boy baby, twenty months old, was suffering from tetanic convulsions affecting the whole body. The muscles were twitching, the face was purple, and there was great dyspnea. The onset was very sudden.

The treatment with lobeline began within fifteen minutes of the start of the paroxysm, and consisted in giving a hot bath, a warm enema, and vigorous massage, followed by applications of a hot, dry blanket.

Internally, I administered lobeline sulphate. I dissolved 1-50 of a grain of this alkaloid in one-third of a glass of warm water, giving 2 teaspoonfuls of the mixture every five minutes for 4 doses. I also gave the indicated homeopathic remedy.

Within five minutes, or soon after the first dose, there was relaxation; within twenty minutes, the body was limp and the eyes were reacting normally; and in forty-five minutes the child was resting comfortably. There has been no recurrence of the spasms.

To say that I was pleased with the action of lobeline in this case, hardly expresses my feelings.

STANLEY SPRAGUE.

Stockton, Cal.

LOBELINE SULPHATE IN ANGINA PECTORIS AND ASTHMA

I have been using lobeline sulphate in a few cases of angina pectoris and in asthma, both cardiac and bronchial, but always have given it in combination with other remedies. I do not recall using it alone at any time, so, only can say that I am pleased with the effect of the following combinations, which I have administered hypodermatically:

For angina pectoris, acute attack
- Lobeline sulphate ..... gr. 1-100
- Nitroglycerin ..... gr. 1-100
- Morphine sulphate ..... gr. 1-8

For bronchial asthma, severe attack
- Lobeline sulphate ..... gr. 1-100
- Morphine sulphate ..... gr. 1-8
- Atropine sulphate ..... gr. 1-50

For cardiac asthma
- Lobeline sulphate ..... gr. 1-100
- Nitroglycerin ..... gr. 1-100
- Digitalin ..... gr. 1-30

JAMES R. COOPER.

Trenton, N. J.

BISMUTH SUBNITRATE AND CASTOR OIL FOR BURNS

The following treatment for burns, which terminated satisfactorily, would have been gladly received by the writer, years ago, had it been reported in a medical journal.

A woman, not very long ago, was lifting a kettle from the fire on a cook-stove, when a can containing half a pint of kerosene, which someone had carelessly set in the warming-oven of the range, tilted and fell into this open fire, and the flaming oil was thrown over her bare arms from the elbows down, over her clothing, and neck and face. There being snow on the ground around the house, the woman had the presence of mind to use it to quench the flames and thus save her life. She was within three weeks of full-term pregnancy, but the baby was born two days after the accident. (Incidentally, the latter lived, although it required much care to keep it breathing the first four hours. The day following, they employed a trained nurse.) The following treatment was instituted:

All burned surfaces were covered with sterile gauze wet with a saturated boric-acid solution containing sufficient picric acid to give it a definite yellow color. Blisters were opened and the dead skin was peeled off as rapidly as possible. When the granulations became rather painful, I happened to stumble on to the mixture of castor oil and bismuth subnitrate, combined in various proportions, from 1 dram to the ounce, applied with a lather-brush, to a paste thick enough to have to be spread with a spatula. Only one thickness of gauze was laid on the burned skin so as to enable fresh applications every few hours if the gauze hardened in the secretions, and this was covered with waxed paper or oilsilk. Twice a day the burned surfaces were exposed and the serum washed off with the solution of boric acid; then fresh bismuth paste was applied.

No ulceration or infection resulted in any part. The sloughing of tissue was very rapid where the burns penetrated the skin and into cellular tissues. No muscles or tendons were exposed by the sloughing of burned tissue. Very seldom did the gauze stick so fast to the granulations to make these bleed when it was removed. After twenty-five days—the time of this writing—the affected areas are entirely covered with new skin. The advance of new skin was very rapid, as much as half an inch in twenty-four hours after the granulations were ready for it. This was very much faster than I ever had seen under any other treatment. All indications, when large surfaces were sloughing out, were for a long siege of skin grafting.

The new skin does not now appear as if it would contract and disfigure the surface. This woman is 30 years old, medium fleshy, and of ordinary health. In all, nearly a square foot of skin over the stomach was badly burned, with an oval spot of about three by four inches in which the tissues sloughed out beneath the skin. The front of the neck, chin, and cheeks were badly blistered, but in only a few places were the deeper tissues penetrated.

The burns were deep in the folds between the vulva and the right thigh and caused about six square inches of both cuticles to be entirely destroyed. This was difficult to treat, on account of the lochia following confinement, with the danger of uterine sepsis.

Both arms were entirely stripped of skin, except the palms of the hand and between the fingers. In an area of about 20 square inches, in different patches, on the left arm and back of hand the deeper tissues were penetrated. The amount of serum secreted here was annoying. The deeper the burned surface, the greater the proportion of bismuth to oil was used; that is, after granulation had started and the flow of serum was checked, being, for the last portions to heal, thick enough to be spread with a spatula. As the new skin formed, the bismuth covered it, and then was not disturbed till it scaled off spontaneously.

I believe much suffering can be avoided by using this dressing for granulating tissues, as it prevents adhering to the gauze and the time to heal over will be much shorter.

C. W. McFADDEN.

Moorhead, Ia.

EMETINE IN PELLAGRA

In the March number of CLINICAL MEDICINE (p. 265), I note an inquiry from Dr. A. D. Hilton, of Grannis, Ark., who has used emetine in the treatment of pellagra and wishes to hear from others who have employed the drug in cases of this kind.

During July, 1914, I treated a case of pellagra with emetine, the drug being given in this instance to control diarrhea. I was pleased, though surprised, to find that not only did it relieve the diarrhea, but also caused a disappearance of all the other symptoms of the disease. I am now watching this patient for any return of the symptoms. I will report my experience later.

More recently I tried emetine in a case of pellagra in its last stage, but in this instance without beneficial results.

C. R. McKEE.

Sand Hill, Miss.

A CURE FOR LICE

Last night I was reading in the February issue of CLINICAL MEDICINE an article asking for a cure for lice. I don't know whether it was for head-lice or the oldfashioned "gray-backs" that the writer asked about, but I can tell him what to do for either.

About eleven years ago, I was on my way to Alaska to teach in the Government service, when an oldtimer there asked me whether I had brought anything to kill lice. Surprised, I answered, "No." Thereupon he told me to get some sabadilla powder and whenever I was bothered to sprinkle some of it in my clothes and bed. I got it. During that winter I must have gotten lousy fifty times, but each time a single application of

the powder was enough. I also used it on the natives and cleaned the lice off a good many of them.

Later on I was working on a steamer, where I came in contact with the native deckhands and got lousy again. I could not get a bath, so, I shook some of the powder inside my shirt and let it go at that. I was compelled to wear that shirt more than three weeks without washing it. During that time I did not have another louse on me, and when I got to a hotel in Seattle and got into a good bath there were no insects of any kind in my clothes.

Since then I have tried the same stuff on the natives north of Nome and found that it would remove the lice every time. I tried kerosene on the natives, but the sabadilla seemed to do better work. I hope this will be of value to some of the "family."

F. F. FELLOWS.

McMinnville, Ore.

IT IS "THE" JOURNAL

I have just received the February number of CLINIC MEDICINE. It certainly is *the* journal of clinical medicine, and it is not vain flattery to say that it improves with every number, since the present issue is a little the best I have yet had, and in a varied practice of some thirty odd years I have seen more or less of the periodical literature of our profession.

J. L. HENDERSON.

Osceola Mills, Penn.

FINANCIAL PROBLEMS

It is proverbial that physicians are poor financiers. They are excused for this failing, on the ground that they are so deeply interested in the scientific side of their profession and in the interests of their patients that they neglect their money affairs. The monetary proceeds to be derived from their labors are the real inducement for them to continue to serve the public; and, as they are doing a share of the world's work, they, like the laborer, are "worthy of their hire."

Modern business is highly systematized; without system, one would never get far in the business world. The successful merchant or manufacturer realizes that his net profits come in small figures in the percentage calculations, that most of their gross receipts represent cost and expenses. Physicians little realize this, and most of them do not keep a complete set of books and have but a very vague idea about their expenses and losses. Besides his books of accounts, every good business man keeps a record of the total amount of business transacted and total collections and expenditures. He knows the exact amount of his gross and his net income. Without this information, he is not in condition to improve his finances.

The following figures, from the books of a general practitioner for 1914, illustrate this point: His annual business amounted to $3454.75; collections, including those from old accounts, $2407.25; expenses, $1367.42; net proceeds, $1039.83. Expenses divided as follows: Drugs, $323.15; general (including rent for office, light, fuel, electric power, telephone, books, literature, society dues, and such like), $425.45; automobile upkeep, $450.92. (He keeps two cars, an old 5-passenger one, that averaged 19 cents per mile to operate, and a new, light roadster, that cost 4 1-3 cents per mile for the year.) Team and buggy cost for year, $166.90. (The team was in the pasture about half the year.) His total business fell about $300.00 short of the previous year; which likely tells us that he is making fewer calls to carry a patient through an illness than formerly, because of probably using the telephone more. His office charges are from 50 cents to $1.00, including medicine. (This is too low; he should be getting from $1.00 to $2.00.)

The most noticeable thing is, the difference between the total business done and total cash receipts. He is a poor collector. He has made about 6000 miles over country roads; and these often were bad, and there was much bad weather and night drives. He should be booking over $4000.00 and collecting $1000.00 more than his books show, without increasing expenses. He cannot keep up this amount of work for more than a few years longer, and especially not without being well waited upon. His expense account shows very little paid out for labor. He cannot reduce those expenses very much. They rather will increase, unless his business falls off, except that he could confine himself to using the light car. The net proceeds are much too small and the old doctor is of the opinion that he was more prosperous twenty years ago, when his yearly practice was a little over $2000.00 and kept only a team of horses and had a cheap poorly furnished office; then his net income would purchase about twice as much as at present.

Medical fees have advanced some, but not nearly as much as has the cost of living.

This particular doctor probably is as well off as the average general practitioner. Every physician should work these problems out for himself and adapt himself to present conditions; and a complete set of books carefully kept is the first step in the right direction.

M. F. MINTHROW.

Castana, Ia.

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[Read the editorial on "The Doctor's Ammunition" and Mr. Gifford's article, "Why So Many Doctors Fail," both in this issue. We are anxious to deal seriously, and concretely, with the money problem in this journal, and ask your earnest thought and cooperation.—ED.]

CALCIUM SULPHIDE: WILL IT CURE THE MORPHINE-HABIT?

In November last, Dr. J. H. Johnson, of Nashville (Tenn.), in a personal note, wrote us as follows:

"About six weeks ago, a man came into my office, and for a simple ailment from which he was suffering I prescribed calcium sulphide. Three days later, the man called again, to tell me that he had been in the habit of taking 1 grain of morphine every day, but since taking the remedy I had given him he had lost all desire for the narcotic drug. What do you know about this?"

Upon receipt of this letter, we wrote to Doctor Johnson for more details and for a description of any further experience he might have in this particular. In reply we received the following letter:

"I am not yet ready to make a full report regarding the use of calcium sulphide in the treatment of morphinism. Thus far I have treated only two patients, both taking about 1 grain of morphine daily. Under calcium sulphide, both report the disappearance of the desire for the drug, this lasting until the fourth day.

"About this time, they complain of the appearance of a heavy aching feeling in the legs and of considerable restlessness. To relieve this condition, I have added to the calcium-sulphide treatment the use of potassium bromide. This seems to help, and my patients are getting along much better. One of these patients is 36 years of age and the other is 60 years old.

"Thus far, I have given only small doses of the calcium sulphide—never more than 4 grains in any one day. I am almost persuaded that this drug will prove a real cure for this awful habit, to which so many of our people are slaves.

"I have heard of a woman in this vicinity using 30 grains of morphine daily. I shall try to persuade her to let me treat her. Her case should prove a very thorough test as to the efficiency or nonefficiency of this remedy. I shall continue my experiments and report to you again soon."

This report, while it is brief and as yet not complete, certainly is most suggestive. Possibly other readers of CLINICAL MEDICINE have tried calcium sulphide in morphinism. If so, we hope they will let us know what results, if any, they have secured with this remedy.

One suggestion we would make, and that is, that whatever method of treatment is employed, the most thorough elimination through the skin and clearing out of the bowels is absolutely essential. The restlessness of which Doctor Johnson's patients complain is a common symptom during the stage of deprivation and is one evidence of the excessive toxemia from which all these patients suffer. They must be cleaned out thoroughly—every one of them.

THE REMSEN BOARD

I have read with a great deal of interest Doctor Fairbanks' article in the October, 1914, number of CLINICAL MEDICINE under the caption "Acidity and Food Poisons," and I wish to observe that, so far as any authoritative dictum emanating from the socalled Remsen board relative to the composition or wholesomeness of baking powders or any other article that is injected into our foodstuffs is concerned, I believe that the consensus of opinion among intelligent people will sustain the views of Doctor Wiley, the opinions of the Remsen board to the contrary notwithstanding; and that they will prevail long after the Remsen board has passed into "innocuous desuetude."

The opinion seems quite general among well-informed and unbiased people that the Remsen board is not far enough removed from the questionable influence of mercenary corporations and manufacturers of factitious eatables and drinkables to officiate as reliable, disinterested public governmental censors of the quality of our foodstuffs.

GEORGE D. STANTON.

Stonington, Conn.

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[We cannot agree with Doctor Stanton with regard to the character of the member-

ship of the Remsen board. It would be hard to select a body of men of higher standing than Chittenden of Yale, Remsen of Johns Hopkins, Long of Northwestern, and Herter of Columbia. It is not to be believed that men like these can be influenced in the slightest degree by "mercenary corporations and manufacturers of factitious eatables."—ED.]

MAKE A CENSUS OF THE DRUG ADDICTS IN YOUR TOWN

Here is something very important. In order to arrive at an accurate estimate of the problem of the drug addict, it is essential that we should know how many of these people there are. Thus far we have only estimates—guesses—based upon insufficient information.

As a basis for judgment we should have a census of these individuals in as many towns as possible; and these towns should represent all parts of the country. We therefore urge readers of CLINICAL MEDICINE to undertake such a census in their several towns, working in connection with other physicians and with the local druggists. The information secured should be of an absolutely confidential nature, and all "repeaters" should be excluded. I wish we might hear from at least one representative town in every state. Please undertake it in yours, and report.

APPENDICITIS: "A BEAUTIFUL CASE"

I beg to be allowed space in your journal to demonstrate a "beautiful case" of acute appendicitis which has just come under my care.

A strong, robust country girl, 14 years of age, living nine miles out in the country, went to school as usual last Monday and that evening at supper ate some cucumbers. During the evening and night she complained of pains in her abdomen, and she slept little. Next day she remained in the house and vomited several times. Her parents made hot applications all day Tuesday, and gave her some patent medicine tablets and pills to move the bowels, but no passage took place.

At 1:00 a. m., Wednesday, I was phoned for and reached the girl's bedside at 2:30 a. m. What did I find? Her temperature was 101° F. Pulse 120 and of a dicrotic character. Respirations, 20. Deep palpation over McBurney's point showed distinct tenderness, although she said the chief tender spot was in the epigastrium.

No previous history of pain in the abdomen. No cough, chest clear, tongue clean. Her menses began when she was twelve years of age, and have been regular since then, the last time being a fortnight ago.

The girl's parents were immediately advised to have an appendectomy done just as soon as she could be got to a hospital, some forty miles away, and she was taken in my automobile, slowly, along the nine miles to the train. From the moment I saw her I ordered that no water, food or medicines should be given, but I placed an ice bag directly over the right iliac region and this gave great relief from pain. The Fowler position was adhered to—a semi-erect posture—and no cot or stretcher allowed and I had her sit up in the railway coach to travel to the hospital.

Her temperature went down to 99.8° F. eight hours after I first saw her, when it was, as I have said, 101° F. Her pain was now slight, and judging from this reduction in temperaure, one would be inclined to think things were clearing up nicely; but that is just where a mistake would be made, for a lessening of pain and a fall in temperature with the pulse still at the same rapid rate, that is, 120, all indicate gangrene.

The operation took place immediately on arrival at the hospital—within forty hours of the first symptoms—and the following report from the surgeon speaks for itself:

"The patient was immediately put on the table. Her appendix was long and gangrenous, extended down through the pelvis and was on the verge of rupture. It was a mighty angry-looking organ and was not removed one moment too soon. Another ten or twelve hours would have developed a different story. The mucous membrane was entirely necrotic from base to apex, the walls very much infiltered and red, but there was no evidence of perforation. The pelvic cavity was filled with bloody serum, indicating that there had been considerable reaction as a result of the migration through the wall of the appendix. We introduced drainage and she is now in a Fowler position and we shall anxiously await developments. However, I feel that unless some unforseen complication develops she will recover."

This case is another reminder to us all that there is no medical treatment for appendicitis. If you diagnose a case as one of appendicitis, our duty is to have that appendix out inside of the first forty-eight hours of the attack. If the patient is not put on the table

during the first forty-eight hours, then wait until the fifth day or a little longer to allow walling-off to occur and then open the abdomen and let out the pus, i. e., treat the case as one of abcess; later, remove the appendix. It is after the first forty-eight hours that Ochsner's starvation treatment is advocated, while waiting for this walling-off treatment. But Ochsner, himself, says that the appendix should be removed every time inside the first forty-eight hours, if possible.

R. HESLOP-PAYNE.

Tripp, S. Dak.

[It is indeed, a "beautiful" case. However, I hardly think our readers will agree with Dr. Heslop-Payne in drawing such a general conclusion from even so instructive a case. I fancy many will have experiences to relate in which appendicitis *was* successfully treated by medical measures, or, at least, without resort to the knife. Not all cases of appendicitis by any means, are suppurative; and in these days of refined clinical diagnosis it is really not such a difficult matter to differentiate between a simple and a suppurative case, even though there be no decisive physical symptoms. The blood examination will usually tell the story with pretty uniform reliability.

If the infection and the inflammation be of a simple character, medical treatment is, according to the experience of many physicians, quite justifiable. Prompt eliminative and antiphlogistic medication usually proves effective. If the patient is seen at the beginning of the attack, an ounce of castor oil or other quickly acting purge will serve to clear the intestinal tract effectually. At the time when the oil should operate, it is well to give a high enema of decinormal salt solution, with the patient in the lateral-prone position, hips elevated.

The patient should be given no food for twenty-four hours, at least, and then only the most easily assimilated fluid diet in small quantities for several days. The pain may be relieved and the spasm relaxed by means of the antispasmodic combination of glonoin, hyoscyamine and strychnine arsenate. Morphine, with strychnine or hyoscine may be used in severe cases, but is best avoided. The temperatue is controlled with aconitine or the defervescent compound, together with plenty of pure water to drink. Compresses wrung out of a hot solution of epsom salt, one ounce to the quart, applied over the appendical region, will also help materially in reducing congestion and spasm. The value of a coli-bacterin should not be forgotten; also of nuclein, given hypodermically, to increase the resistance. This latter remedy should be given in all cases as a routine, whether treated medically or surgically.

However, if there is the slightest evidence of pus formation, as shown by the blood picture and the clinical symptoms, then the patient should be operated upon at once, as advised by Doctor Heslop-Payne. In case of boubt, hie to a competent surgeon and let him decide. Take no chances.—ED.]

"I KNEW IT, BUT DIDN'T THINK": THE CASE OF ECHINACEA

I want to say that I have read Doctor Ellingwood's article about echinacea, in the December issue of CLINICAL MEDICINE, with unusual interest, the more so, since echinacea has been a hobby of mine for more than six years. In fact, I catch myself using it for nearly everything, without much reason for it, sometimes, except that I never in my life made use of it that it did not give me marked betterment, regardless of the disease or the condition.

When I attended college, Professor Waterhouse one day was giving a quiz on belladonna. My seat-mate (now Doctor Van Horne Goessling, of St. Louis), when I had answered a question that he had missed, whispered to me, "I knew that as well as you, but did not think." That expression made a lasting impression upon my mind.

I cannot say as much about Doctor Ellingwood's article. I thought I knew a lot about this echinacea, but this article in the CLINIC rubbed up the old ideas to me, besides presenting lots of new ones. One of these worth-while ideas was that the dose should be often repeated. Another marked idea advanced was, that the remedy is positively a corrective of depraved and perverted body-fluids. For this latter reason alone, I deduce the following conclusions that, to my mind, account for the universal good I have always obtained from its administration. I think I should be justified in saying that "the body is as well as are the fluids therein." If we keep the fluids well, the body will be well. The blood is the hod-carrier for all repair and elimination—that is what I mean to express.

I am not writing this to place emphasis on Doctor Ellingwood's article, but to tell a story on myself, another case of "I knew it, but did not think."

While on a recent tour through Central America, I stopped for five weeks at La Ceiba,

on the north coast of Honduras, a town of about 7000 population. The town recently had suffered severly by fire. The entire business part was burned down, including all the hotels, consequently our party had to rough it as best we could. I bought a cot and mosquito-netting, and rented a small room having a sheet-iron roof but no ceiling. It was comfortable in the room at night after 10 o'clock, but uninhabitable in the daytime; it felt as if bread could have been baked in it during the day.

Most of the overground cisterns were destroyed, so that water was very scarce, there being no mountain-water supply. If you ate or drank anything, you got more or less "pump-water," obtained by driving a pipe down in the sand about 8 feet and attaching a pitcher-pump to it. The natives know very little about sanitation, and care less, regardless of pretty rigid laws on the subject. They regard it as white man's "foolery." During the fourth week of my stay, I began fevering. If you have never seen a case of tropical fever, you hardly will know how to sympathize with the victim. The fact is, though, one is not really very sick. The best way of putting it is to say that you are just "knocked out."

The symptoms are about as follows: Slight fever every evening; goes off about midnight, if you get a good sleep. Bowels inactive, on account of absence of bile secretions. Dull soreness in the liver. Constant dull headache if bowels are not kept active, caused by absorbed toxins. Constant desire to sleep when bowels are inactive, owing to the toxemia. It is best not to allow yourself to sleep too much; some exercise is of much benefit. The blood or urine contains very little, if any, bile, and bile seems not to be secreted, consequently none can be excreted into the intestines. The skin becomes dirty, but not yellow, resulting more from pigmentation. Liverspots appear on the face, and there is an eruption of a vesicular nature over the body about the size of chicken-pox, but not so numerous; usually two or three on the chest. These vesicles run a course of about thirty days and leave little scars. I suffered worse with urticaria than from any other symptom. The tongue usually is clean only at the base.

Now to the point: Tropical fever is dependent upon blood perversion, and is not a malaria—that is my opinion.

As to treatment, I took almost everything that we all naturally would think of to stimulate the liver and bowels, from chionanthus on down the line. As long as the alimentary canal was open and active, I felt very well, but upon the withdrawal of the purgatives the sypmtoms would return in two days.

Immediately upon reading Doctor Ellingwood's article, a new light dawned on me regarding my sickness. The "hod-carriers" that I pressed into service only removed debris, but they did not rebuild. I said to my wife: "I have been acting the fool, when I should have had better sense. I am going to take echinacea, and get well."

Beginning to take 2 drams in four doses per day, recovery proceeded nicely from the first dose. It has been one week now, and I am using no purgatives at all. Bowels move, tongue is clean, and I feel as if I could jump the fence. Echinacea will cure me in three more weeks—sure!

T. H. STANDLEE.

Edgewood, Tex.

[And here's hoping it did!—ED.]

COMMON MISTAKES PHYSICIANS MAKE: ALSO, A FEW SUGGESTIONS

1. Prescribing castor-oil or epsom salt for a physic, and then sending the patient to the grocery-store to get it.

2. Putting up liquids in 8-ounce bottles and directing patients to take a teaspoonful every three or four hours. On January 7, the writer found in a house, two 8-ounce bottles for one patient. The direction on one was, to take a teaspoonful every three hours, on the other it was, to take a teaspoonful every four hours. A hint to the wise is sufficient.

3. If you charge $10.00 for a confinement-case in town, why not charge that plus mileage out in the country? That's right, fair, and reasonable. Let's all do it. Whatever your charge is in town, add mileage on trips into the country.

4. The writer recently had reasons and the opportunity to knock a competitor hard—he didn't do it, though.

5. A certain physician has the following displayed in his office in big letters:

My charges will depend upon:

1. Condition of the patient.
2. Distance to patient.
3. Whether day or night trip.
4. Kind of drugs used.
5. Weather and roads.

6. Day visits in small towns and villages should be $1.50; night visits, $2.00. Do you charge as much? If not, why not?

7. If it were not for selfishness among physicians, there would be more team-work (partnerships).

8. It is not necessary to patronize saloons or to loaf in them for friendship, nor is it business; still, some physicians do this very thing.

9. Do not prescribe peroxide of hydrogen, nor should you wrap your medicines in pages torn from medical journals.

10. Why don't you physicians write something of interest for your medical journals? You have splendid ideas on some subjects that would greatly interest and benefit the rest of us. Come on, now; don't be selfish. If you have something good, pass it on.

"KIRK."

FETAL POSITIONS DESCRIBED

Referring to my article entitled, "Three Cases of Transverse Presentations" (p. 183, March issue), I was surprised to read toward its close: "Some textbooks state that the dorsoposterior positions are easier to deal with, but I certainly have not found them so."

This is exactly what I did not say, but what I claim the textbooks ought to say. I have before me a leading textbook on obstetrics (latest edition) which maintains that the dorsoanterior positions are more common and are easier to deal with; further on the author declares that the dorsoposterior positions are rarer and much more difficult to deal with.

Even if I run the risk of appearing pedagogic, I will say that we have four positions in which we may find the child in the uterus in transverse presentations: either the back or the belly of the child will face the operator, and, furthermore, the head of the child may be found on either side of the mother.

This is not very technical; on the contrary, it seems easier "than falling off a log," so that even the general practitioner (poor imbecile!) ought to be able to grasp it.

The rudiments of Latin teach us that *dorsum* means the back of either man or animal, and that *lævus* means left and *dexter* means right. Thus, when we have head to left and back anterior, we call it scapulolævo-anterior (Sc. L. A.); the scapula being selected as the point of direction, because in transverse presentations the shoulder is generally the part that presents first. So, transverse presentations amount to about the same thing as shoulder-presentations, although, in rare cases, other parts might present first.

Head to right, back, anterior is called scapulodextro-anterior (Sc. D. A.).

Head to right, back, posterior is, scapulodextro-posterior (Sc. D. P.).

Head to left, back, posterior is, scapulolævo-posterior (Sc. L. P.).

It does not follow that the long axis of the child always crosses the long axis of the mother at a right angle; there are intermediate, or oblique, positions, and these no doubt are the more common.

But here, Mr. Editor, comes the point and the explanation: The child is folded upon itself like a jackknife—chin on sternum, arms crossed over the chest, legs crossed over the belly. Now, does it not stand to reason, if these feet and arms face you (which is the case in dorsoposterior positions), that it will be easier for the operator to bring down a foot or change the position to a head-presentation? And, on the other hand, if the back of the child is toward the operator and the feet and arms are toward the mother's spine or sacrum (which is the case in dorsoanterior positions), will it not be much more difficult to get a hold of a leg, or to change the polarity? I certainly have found it so.

H. G. HENRIKSEN.

New Market, Minn.

WANTED: URINE FROM VICTIMS OF PHOTOGRAPHERS' DERMATITIS

Will you kindly publish this announcement, so that I may reach as many cases as possible?

The subject of chemical dermatitis has never been adequately investigated. I have, in a few cases, seen some interesting results that would seem to point to the possibility of preventing poisoning by photographic chemicals. It is necessary to secure a large series of cases to work out the points, and I should, accordingly, be grateful if every reader of THE AMERICAN JOURNAL OF CLINICAL MEDICINE who has ever had dermatitis from metol, duratol, or any other photographic developer or chemical would please send me his name and address.

My friend, Mr. Frank R. Fraprie, editor of *American Photography* and *Popular Photography*, has consented to assist me in securing the cases by publishing an editorial appeal in his two magazines.

The idea on which I am working is, that susceptibility to skin irritants of the photo-

graphic chemicals is not constant, but varies with the acidity of the urine; in other words, only acidemic individuals seem to get poisoned.

For instance, I have twice been poisoned by duratol while I was acidemic; but a long period of complete immunity intervened, during which the urinary acidity was normal and elimination in other respects was good. Whether this idea will "hold water" when, say, a hundred cases are examined and treated, remains to be seen.

Another curious thing which needs study is the fact that persons susceptible to a given developer seldom seem to be affected by any other.

Our idea is, to send out history-blanks and mailing-cases, the latter for specimens of urine, to be tested for total acidity to phenolphthalein (or to mail test-outfits to distant points).

If a large percentage of the cases prove to be acidemic, we intend to institute sodoxylin treatment, then secure further samples of urine.

If removal (or correction) of acidemia is the thing needed to prevent chemical dermatitis, the establishing of that fact will be of the utmost value to the profession, as these cases are becoming more frequent with every year.

MALCOLM DEAN MILLER.

Wollaston, Mass.

INJECTION TREATMENT OF HEMORRHOIDS

In the February issue of CLINICAL MEDICINE, page 160, I observe an article by Sir James F. Goodhart, taken from *The London Practitioner*, regarding the hypodermic treatment of hemorrhoids.

Since the year 1877, I have used no other method in any case of hemorrhoids, and have had perfect success in every instance, and, what is better, none of the patients had to go to the hospital, but all kept on attending to their daily duties while under my treatment. It takes from six to twelve weeks, according to the severity of the condition, to complete a cure.

I quite agree with Doctor Goodhart that there is entirely too great a desire in this country to use the knife, and hundreds of pile-patients could be cured by the proper use of medicine, while the result would be far better for them. A knife should never be applied to hemorrhoids if the best results are expected; for, very often the surgeon does not get all the tumors, while frequently the cutting results in the formation of a fistula, which is as bad as the original trouble, or worse.

The same rule holds good in cancerous and malignant tumors, for all of which I have employed the hypodermic treatment for the last twenty-two years, and have a record of over 80 percent of cures, where I am positive from past experience and observation that the knife would have failed. However, lots of tumors are cut off that are claimed to be malignant, when, as a matter of fact, there is not the least semblance of malignancy about them.

The knife will not cure a malignant growth of very long standing, and we seldom get hold of them until they are well advanced. The hypodermic injection nearly always will effect a cure, especially when no vital organ is involved.

Goiter can be eradicated by the use of medicine in most cases, and appendicitis can be relieved by proper treatment in 99 cases out of every 100. Appendectomy now is simply a fad, and I believe that in ten years from now it will arouse disgust when operation is suggested.

Fulton, Ill. G. W. CLENDENIN.

[Doctor, you should give us the details of the methods you employ. The nonsurgical treatment of goiter and appendicitis, the injection treatment of hemorrhoids, and any method of treating malignant growths successfully are matters of intense interest to all of us. Give us all the help you can.—ED.]

ANOTHER EXCHANGE OFFER

Dr. C. Lawson Johnson, of Ripley, Tenn., offers to exchange his formula for the home treatment of morphinism which "gives 100 percent of complete cures, with practically no withdrawal symptoms," for any other formulas or suggestions of practical value to the general practitioner. What have you to "swap" with Doctor Johnson?

We have suggested to the Doctor that the best way and place to exchange helpful therapeutic ideas is through the pages of CLINICAL MEDICINE. If you have something good, tell us all—and tell all the details—and ask the other fellow to come back with his favorite therapeutic expedient. By doing this, we shall all benefit. Let us make the columns of CLINICAL MEDICINE a free forum for universal helpfulness.

What do you say—everybody?

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

CHLOROSIS is an expression of many different constitutional conditions. In some instances, it is a symptom or serious complication, rather than a disease by itself, although it needs treatment as much as does the disease which it complicates and aggravates. It is far from exceptional to find it associated with the degenerative constitutions, with all their expressions, including as Virchow has pointed out, the arrested development of the circulatory, hematogenous, and reproductive organs.

It is too often forgotten, in this connection, that the child is not an undeveloped man, but that the man is an imperfectly developed child. The child, as Havelock Ellis remarks, with its relatively enormous head, its large, protuberant abdomen, its small chest, short, feeble legs, comparatively vigorous arms, smooth almost hairless skin, large liver, kidneys, thymus, and adrenals, presents an anatomic picture distinct from that of the adult. The differences are such as imply a greater blood-making as well as greater eliminative power.

The liver, which practically is two organs (judged from its origin in the embryo), exerts, from the beginning, as Minot has shown, a sanguifactive and a poison-destroying function. As it appears before the heart, it obviously plays a role in the proper development of the circulatory system.

It is not astonishing, therefore, to find, as Sir Andrew Clark has pointed out, that stercoremia plays a large part in the development of chlorosis. The fact that chlorosis is most frequent in women does not militate against this opinion of Clark, as Osler seems to think. Women are most likely to be affected by stercoremia, since in them circulatory perturbations are most frequent, in consequence of menstrual phenomena, and they also are most affected by autointoxications.

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W. A. Hammond believes chlorosis to be a disease of the nervous system, and, when morbid changes take place in the blood, during its continuance, they are always secondary and directly the consequences of nervous derangement; and, therefore, they are nothing more than accompaniments of the chlorotic condition.

Chlorosis frequently runs its course without any symptoms of pathologic change in the blood being manifested. Luzet has said that hysteria and chlorosis are sisters. Stieda claims that in chlorosis there are signs of general ill development, and that in particular there is imperfect development of the breasts and genitalia, with a tendency to contracted pelvis. According to Lloyd Jones, chlorosis is but an exaggeration of a condition normal at puberty, and in many women at each menstrual period. In his opinion, chlorosis is the extreme pathologic element in preparation for motherhood. The elements entering into the preparation for motherhood involve both increased need of extra nutriment and decreased elimination. The hepatic and renal functions are taxed coincident with the increased hematogenic demand.

The conditions thus produced resemble those found in cyanosis arising from toxic products resorbed from the intestine. Here, Vander den Berg and Grytterink have found two sets of changes in the blood—sulphohemoglobin and methemoglobin. These changes are due to reduction of hemoglobin by nitrates. Chlorosis, despite the contrary opinion of Osler, sometimes, although infrequently, occurs among males. This fact was obvious even in the time of Shakespeare, who makes Falstaff remark ("Henry IV.," partII, act IV, sc. 3): "There is never any of these demure boys come to any proof; for thin drink doth so overcool their blood and making many fish meals, that they fall into a kind of male green-sickness." In "Antony and Cleopatra" he remarks: "Lepidus, since Pompey's feast, as Menas says, is troubled with the green-sickness." Observations of the preadolescent stage of hebephrenia indicate that a by no means small proportion of neuropathic boys are, like neuropathic girls, troubled with chlorosis. The chlorotic state of pretubercu-

losis is free from sex limitation. While this condition differs somewhat from pure chlorosis, it resembles it in many of its features.

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The following leading symptoms, according to A. Sokolowski, demand consideration:

The pale aspect of the skin is one of the most important symptoms, since it misleads acquaintances and not infrequently leads the physician to the erroneous diagnosis of chlorosis. This pallor, however, often, but not always, is distinguishable from that of chlorosis. In aggravated cases of chlorosis, this paleness assumes a waxen hue shading into greenish, while in the milder cases all gradations of this color are exhibited.

On the other hand, the skin in pseudochlorosis has a bluish-gray, shading sometimes into an ashen hue. The same may be said of mucous membranes. The gums and mucous lining of the cheeks never exhibit such a high degree of pallor in pseudochlorosis as is almost typically characteristic of ordinary chlorosis. General lassitude, dyspnea on ascending stairs, and frequent palpitation of the heart are some of the most common and constant concomitants of the more advanced stages of ordinary chlorosis. Some subjective symptoms of pseudochlorosis appear at an earlier date and are of less intensity. Chlorotic persons are easily fatigued, especially when extra physical exertion is demanded, such as climbing stairs; girls, however, affected by pseudochlorosis become fatigued upon the slightest exertion, while dyspnea may supervene during perfect quiet.

Digestive disorders are constantly met with in both. A most constant symptom in pseudochlorosis is persistent lack of appetite lasting for weeks or even months. This also happens in true chlorosis. Here, perverted appetite more often exists, the loss of appetite giving way to bulimia, an unreasonable desire for unusual food, which rarely occurs in pseudochlorosis. Among other examples of deranged digestion in both is obstinate constipation. Vomiting is rare and usually ascribable to spells of severe dry-coughing.

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Emaciation is the most constant typical phenomenon of pseudochlorosis. This is progressive and constitutes an important diagnostic mark distinguishing it from true chlorosis; the patients afflicted with the latter trouble often losing little or nothing in weight, in spite of their disordered digestion.

Menstrual disorders are symptoms of pseudochlorosis. As a rule, the catamenia are scanty and pale in color and become entirely suppressed only when the symptoms of tuberculosis have become pronounced or are considerably advanced. In chlorosis, on the other hand, the menses are completed but seldom, while they may disappear entirely for a protracted period.

With respect to the circulatory system, well-known murmurs of the heart and jugular veins make their appearance in the course of chlorosis. These may occur in pseudochlorosis, but they are very rare and not of the same intensity. A much more constant symptom in the course of pseudochlorosis is a considerable acceleration of the pulse, attended by exacerbation, toward evening, of the fever, which appears in the earliest stages. These varying attacks of fever recurring every evening sometimes last for months and frequently are the cause of continually progressing emaciation.

In every form of obstinate chlorosis, it is of utmost importance to take the temperature, since the thermometer may throw light on the nature of the disease even in its earliest stages. Fever exceptionally accompanies true chlorosis. This however is rare. Molliere, in 1882, described it for the first time under the name of *chlorose febrile*. Hayem hardly is justified, however, in claiming that these fevers must be referred to certain complications not at all allied to chlorosis. The fever solely referable to pure chlorosis is almost continous, but may occasionally be aggravated during the morning hours. The rises in temperature sometimes occur in pseudochlorosis, during the earliest stages, at a period when physical changes in the lungs are not demonstrable. After such changes have undoubtedly taken place, the fever assumes a continuous hectic character.

Cough generally constitutes a symptom of pseudochlorosis. In the beginning, it is but light, short, and dry, and principally occurs during the evening, but it may make its appearance at night. In the same measure, however, as the disease progresses, the cough grows more constant, with sometimes, in severe cases, more or less bloody expectorations. Sokolowski has seen cases in which cough was completely absent, while the lobes were distinctly affected. Commonly the expectoration is absent, setting in only when the physical signs of parenchymatous induration become prominent. Then the tubercle bacilli and elastic fibers can readily be demonstrated. A short, dry cough frequently occurs in the progress of chlorosis, but principally during the daytime, never in the evening, much less at night. It not infrequently is a reflex symp-

tom originating in the fauces or nose, from granulations, faucial hyperesthesia, muscle hypertrophy, and so forth, and sometimes is a neurotic mimicry of a real disorder.

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In regard to the hematology of chlorosis, Osler remarks: "The drop, as expressed, looks pale. Johann Duncan, in 1867, first called attention to the fact that the essential feature was not a great reduction in the number of the corpuscles, but a quantitative change in the hemoglobin. The corpuscles themselves look pale. In 63 consecutive cases examined at my clinic by Thayer, the average number per cubic millimeter of the red blood-corpuscles was 4,096,544, or over 80 percent. There may, however, be well-marked actual anemia. The lowest blood-count in the series of cases referred to above was 1,932,000. There may be all the physical characteristics and symptoms of a profound anemia, with the number of the blood-corpuscles nearly at the normal standard. Thus, in one instance, the globular richness was over 85 percent, with the hemoglobin about 35. No other form of anemia presents this feature with the same constancy and in the same degree.

"The importance of the reduction of the hemoglobin depends upon the fact that it is the iron-containing elements of the blood, with which in respiration the oxygen enters into combination. This marked diminution in the iron has also been determined by chemical analysis of the blood.

"The microscopic characteristics of the blood are as follows: In severe cases the corpuscles may be extremely irregular in size and shape—poikilocytosis which may occasionally be as marked as in some cases of pernicious anemia. The large forms of blood-cells are not as common, and the average size is stated to be below normal. The color of the corpuscles is noticeably pale, and the deficiency may be seen either in individual corpuscles or in the blood mixture prepared for counting. Nucleated red corpuscles are not very uncommon, and may vary greatly in numbers in the same case at different periods. The leukocytes may show a slight increase; the average in the 63 cases above referred to was 8467 per cubic millimeter."

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Going down to the fundamentals of medicine and psychotherapy, we find that both of them really rest upon the same foundations. Herbert Winthrop Ilsley, founder of the Ilsley School of Philosophy, writes as follows:

"There are many methods of mental healing, all of them based on the same truths, but each is applied according to the intelligence of the healer. The base upon which my system of psychotherapy rests may be indicated by these words of Emerson: 'The universe is the externalization of the soul. . . . . Since everything in nature answers to a moral power, if any phenomenon remains brute and dark, it is because the corresponding faculty in the observer is not yet active. If I am sick or troubled, it is because some faculty within me is not active, not in its normal state; and it follows that, if I wish to be well, I must learn what this sluggish faculty is and give it action if I can. The case is comparable with that of the boy at school. If he fails as a scholar, it is because of too little activity in one or more of his studies. We examine his rank or his work in each study until we arrive at the one that is holding him back, and upon this we direct him to concentrate his efforts until he has gained complete scholastic health.' This indicates, perhaps faintly, the reason and methods at the roots of psychotherapy as I practice and teach the subject."

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Now, these are just the reasons and the method at the roots of medicine. We seek for the inactive something in the patient and then attempt to start it going correctly—only, while formerly it was always some thing that we sought, some tissue or organ, now it very often is some faculty that we seek, just as with psychotherapy. For, behind every physical appearance, good or bad, we now know there lies, as its cause, some thought or faculty of the mind. In the words of Doctor Moore:

"Not a thought, not an idea, not an act of will, not an affection or a feeling of the mind can be excited without positive change in the brain and thence in the blood and secretions; for every variation in the state of the whole or of any portion of the nervous system is, of course, accompanied by a corresponding change in those organs and functions which it furnishes with energy; so that the mind and body are in a constant course of action and reaction on each other as life and consciousness continue."

Among the Books

"JOHN B. MURPHY'S CLINICS"

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. December, 1914. Published bimonthly by The W. B. Saunders Company. Price, per year, $8.00.

Several years ago this reviewer had the fortune to be on terms of intimate friendship with a man who even then was achieving an enviable reputation as a diagnostician and internist, and who since then has "arrived" with international distinction. Early in their acquaintance, the reviewer asked this gentleman the privilege of inspecting his library, whereupon the diagnostician smiled a little enigmatically and led him into a bare room lined with plain deal shelves, and these packed to the guards with unbound pamphlets. The reviewer gazed rather blankly around, then unfeignedly looked his interrogation. "Reprints," said the great man, in his short, snappy way. "The only kind of literature worth a damn. [Yes, kind reader, he said it exactly like that.] These are all reports of actual cases. What textbooks or treatises can compare with that?"

A little exaggerated, of course; he didn't mean it in all its exclusiveness; but, it got his meaning across. Live, current matter, the concrete reports of real, actual, clinical cases—and these, after all, are the stuff out of which the flux of medical progress is made. And this is what one gets in these "Clinics" emanating from Mercy Hospital, fresh from the experience of one of the greatest living clinicians. Nuff sed!

BARNES: "THE TONSILS"

The Tonsils, Faucial, Lingual, and Pharyngeal; With Some Account of the Posterior and Lateral Pharyngeal Nodules. By Harry A. Barnes, M. D., Illustrated. St. Louis: The C. V. Mosby Company. 1914. Price $3.00.

It might seem at first blush that so much has been said and written in the past few years concerning the tonsils as to make a book devoted to them rather a work of supererogation, not to say superfluity. A little further consideration, however, will suggest that this very fact renders it necessary to have provided a decisive, authoritative book on the subject, one that will serve as a sort of clearing house for the mass of information (and misinformation), experience, and opinion that has flooded medical literature during the last ten years or so. Let us have it all collated, winnowed, separated, and evaluated, and thus let us learn just where we stand with relation to the pathologic and the sound tonsil.

Very well, here is the very book needed. Unquestionably, Doctor Barnes, instructor in laryngology at the Harvard Medical School, has had the cooperation and advice, if not the actual assistance, of very high authorities in its preparation, of men such as Minot and Warren and Coolidge; indeed, to these three he makes specific acknowledgement in his preface.

The entire work bears the marks of thorough, patient, painstaking, discriminative labor. It is no hurried, half-cocked effort. It is plainly an earnest, conscientious attempt to restore the tonsil to its real status in physiology, pathology, and therapeutics, backed by extensive observation, wide reading, and, as intimated, by personal conference with men recognized as authorities. The more strictly scientific parts of the book are written with a view to emphasizing their practical application to clinical work; this, of course, taking nothing from their value to the man in the field.

GREENE: "PHARMACOLOGY"

Handbook of Pharmacology. By Charles Wilson Greene, A. M., Ph. D. With 70 illustrations, many new and in colors. New York: William Wood & Co. 1914. Price $3.50.

The evolution of the conception of disease as a dynamic interplay of action and reaction between objective and subjective forces, a disturbed phase of the physiologic system of dynamic adjustment between the body and its environment, naturally has been attended by a corresponding evolution of the conception of therapeutics. We are no longer so intensely concerned about what a given drug does to the sick man, but rather what the man

does in the presence of the drug; we no longer seek the action of a remedy, but its reaction; we no longer give it for its mass-action, but for its dynamic effect.

This new principle of therapeutics has changed our therapeutic valuation of drugs, and consequently our method of investigating and standardizing them; thus giving rise to a modern science of pharmacology, based largely upon animal-experimentation. So it is that nothing short of a thorough understanding of the actual, dynamic reaction of our medicinal agents will satisfy the modern physician for meeting the therapeutic situation adequately.

In pursuance of this requirement, medical schools of repute are establishing courses in pharmacology, and there is growing up a pharmacological literature. To this literature, this book by Doctor Greene, who is professor of physiology and pharmacology at the University of Missouri, is a commendable contribution. It is thorough, not too exhaustive, practical, and in every way adapted to impart to the student and the practitioner the essential fundamentals of this exceedingly important subject.

LANDOLT: "DEFECTIVE OCULAR MOVEMENTS"

Defective Ocular Movements, and Their Diagnosis. By E. and M. Landolt. Translated (from the French) by Alfred Roemmele, and Elmore W. Brewerton. London: Henry Frowde, and Hodder and Stoughton. 1913. Price $2.00.

The movements of the eyes and their anomalies constitute—as the author of this treatise correctly points out in his preface—one of the most important and difficult phases of ophthalmology. The problems they present are much more complicated than those of optics, for in optics the eye alone is the factor with which we have to deal, while the oculomotor system includes the functioning of the nervous, muscular, and even circulatory mechanism of the body. On the other hand, the analysis of the various forms of oculomotor disturbances is of the highest importance in diagnosing many diseases of the brain and nervous system. The more thorough, then, the physician's knowledge of the origin, course, and centers of association of the nerve-tracts involved, the greater is the probability of a correct diagnosis being arrived at.

In this little book, the author presents, in properly grouped fashion, the facts which are absolutely essential to an intelligent interpretation of the oculomotor affections, particularly those which are most liable to be overlooked or forgotten by the general practitioner. Pathology is preceded by a short summary of anatomy and physicology. The subject is condensed as much as possible, consistent with thoroughness. The book does not pretend to be a textbook or even a manual, but it does purport to be, and so it is, a very handy guide to the physician, as the author well says, "in finding his way over the oculomotor system, motor system, a path on which it is so easy to go astray."

A WOMAN'S NUMBER

The May issue of *The Medical Review of Reviews* is to be a woman's number. All the articles contributed will be from the pens of women physicians whose work has achieved national importance. With the growth of the feminist movement, the economic position of women has attracted universal attention. As medicine was practically the first profession open to women, it is only proper at this time to consider whether their entrance into the medical profession has been of benefit.

In order that women may present testimony by which they may be judged, it has been deemed advisable to give them an entire issue to present the evidence of the value of their accomplishments. In the laboratory, in the hospital, in institutions, at the bedside, and in public service, women physicians have performed a valuable function. As a tribute to their earnestness, enthusiasm, modesty, energy, perseverance, and scientific acumen, the May number of *The Medical Review of Reviews* will be dedicated to the women physicians of America.

STEDMAN: "MEDICAL DICTIONARY"

A Medical Dictionary of Words used in Medicine, with Their Derivations and Pronunciation, Including Dental, Veterinary, Chemical, Botanical, Electrical, Life-Insurance, and other Terms. By Thomas L. Stedman, A. M., M. D. Second revised edition. New York: William Wood & Co. 1914. Price $5.00.

We unhesitatingly pronounce this dictionary unique and "different." Should, however, the reader ask why and in what respect it is distinctive, one might find it somewhat difficult to put it into words. The "proof of the pudding is in the eating thereof," and, to appreciate the good (or bad) points of a dictionary, one must use it—and not for a

day or week, but for many days and weeks, months, years, even, may be. Still, even as one is putting such a dictionary to use in his daily work, he "senses the character of a good, thoroughbred dictionary."

All we can say about Stedman's dictionary is, that it is the work of a scholar, of one who knows what a dictionary ought to be, from the letter A to Z, etc., and has made such for us.

For all that, no one else need feel hurt if we express the opinion that Stedman's is the best medical dictionary ever put out in this country. In so saying, we are not belittling other similar lexicons, but are merely commending this one. It is not that the other medical dictionaries are less excellent, but the reviewer holds this one to excel in excellence. Indeed, we discover fresh excellencies in it every day we refer to it. We repeat, Stedman's is a most finished, scholarly work, worthy to take its place among the classics of its kind. And, besides, it constitutes a valuable addition to the book shelf of every progressive practitioner or anyone concerned with medicine and allied disciplines; not the least of its advantages being that its terminology has been brought right up to latest date.

GWATHMEY: "ANESTHESIA"

Anesthesia. By James Taylor Gwathmey, M. D., in Collaboration with Charles Baskerville, Ph. D. With 283 illustrations. New York and London: D. Appleton & Co.

More than once, in our editorial pages, we have called attention to the dangers attending the administration of anesthetics, and the very weighty responsibilities resting upon the person who undertakes this phase of the surgical operation; and have deplored the light, almost reckless, way in which this exceedingly important task frequently is delegated to inexperienced internes and nurses, and even to lay assistants. So, in discussing this subject, Dr. Rupert Hornbrook, of Melbourne, who is one of the highest authorities in the world on anesthetics, once declared that he was "personally unable to recall a single instance where he had had trouble under an anesthetic in which there had not been an error of technic somewhere."

Happily, this country is awakening to the importance of anesthesia and is tardily beginning to pay it deserved attention; and no little part in this awakening is attributable to the work of the senior author of the book before us. Doctor Gwathmey, who is anesthetist to the New York Skin and Cancer Hospital, has virtually made a life-study of anesthesia; and this book represents the net sum of his information and experience. A most interesting section is that which discusses the "daemmerschlaf," or twilight sleep—written of course before the recent public exploitation was started—the references being principally to the extensive reports published during 1907 and 1908. Reading the summary of these reports, as given by Gwathmey, one wonders afresh why medical authority in America set its face so bitterly against the method.

The book is very complete; indeed, we do not see what could be added to it or taken from it, without being redundant, on the one hand, or deficient, on the other. We heartily commend to the thoughtful study of the profession the subject in general, and this work in particular.

TIBBLES: "DIETETICS"

Dietetics, or Food in Health and Disease. By William Tibbles, LL. D., M. D. Philadelphia and New York: Lea & Febiger.

The subject of the dietetic treatment of disease has not received anything like the attention in medical literature that it deserves, and it is to be regretted that in the curricula of medical colleges it is usually either omitted altogether or disposed of in a few brief, superficial lectures at the end of the course of therapeutics. The naked truth is, indeed, that the medical profession, as a whole, is wofully and inexcusably ignorant upon this most momentous and practical aspect of therapy. Not but that there are plenty of books on the market, of a sort; but, thay are, for the most part, perfunctory and empirical, and there are all too few dealing with the subject in the thorough, fundamental way that it demands.

For this reason, it is with more than ordinary satisfaction that we welcome a book like the one under consideration. The author, as a medical officer of public health, is ably fitted to speak on dietetics. It has been his special study for many years and he is a recognized authority on the subject. He deals with it, in this volume, from the ground up. The book, in short, is a most worthy contribution to an all too greatly neglected science.

We are especially glad to find that adequate attention is bestowed upon the role of the inorganic salts and the accessory elements in foodstuffs—a phase of dietetics to which scant attention has heretofore been paid. While the book is essentially devoted to

dietetic principles, the practical application of those principles by no means is neglected, but, on the contrary, forms one of its most valuable parts.

ELY: "DISEASES OF BONES AND JOINTS"

Diseases of Bones and Joints. By Leonard W. Ely, M. D. New York: The Surgery Publishing Company. 1914. Price $2.00.

The whole subject of diseases of the bones and joints is undergoing rapid change and development and is being transferred from the realm of empiricism to that of scientific study. This work by Ely represents an effort to give a judicial, not too precipitate view of the modern status of the matter. It is, as the author informs the reader, intended primarily for the general practitioner, and, contrary to custom, instead of inflicting upon that long-suffering person a mass of detail, attempts to lay down broad general principles, with the evidence upon which they are based, and then to show how these principles are to be applied. The author, who is associate professor of surgery at Leland Stanford Junior University, lays great emphasis upon pathology; indeed, the entire book is predicated upon a knowledge of pathology as a prerequisite for treatment. He declares that whatever originality it possesses is derived from a personal laboratory study of some one hundred and twenty specimens of bones and joints.

There are a hundred or so illustrations of a very helpful character, also a marginal index in red ink running throughout the pages. In short, while there is nothing startling or pretentious about the book, it is a decidedly worth-while contribution to the working-literature on the subject.

"KNOW THYSELF" SERIES

Miss Susanna Cocroft, of Chicago, has written and published a group of books, comprising some dozen volumes in all, under the above series title, treating of various phases of physical and mental hygiene. Miss Cocroft, as most of our readers supposedly know, is the originator and conductor of a system of physical exercises for women, designed to improve their bodily health and efficiency. It is evident, however, that her interest in her sex and her efforts in their behalf vastly transcend this sheerly physical scope, for, these books cover a far wider range of feminine needs and interests. They deal with the esthetic, the mental, the moral, and even the spiritual life of woman. There is, for instance, a book on "foods," another on "the circulation," another on "character," and still another on "aids to beauty," not forgetting a really excellent volume on "motherhood."

The truth, however, is, that every one of them is an excellent little book; quite the best of their kind that we have seen; for it must be confessed that books of this sort as a rule are mawkish, insipid. Miss Cocroft, on the contrary, has managed to pack a lot of genuinely sensible and helpful instruction into her essays, and they are really worth while. It would be a capital idea for physicians to put these booklets into the hands of their women patients—and of those not yet their patients, but potential clients—and recommend them to read, mark, learn, and inwardly digest them. They can be had of Miss Cocroft, at 624 Michigan Avenue, Chicago, Ill.

"INTERNATIONAL CLINICS"

International Clinics: A Quarterly of Illustrated Clinical Lectures and Specially Prepared Original Articles on all Branches of Medicine and Surgery. By Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A. M., M. D. Volume III, 24th Series, 1914. Philadelphia and London: The J. B. Lippincott Company.

This excellent series maintains its very high character of content and discrimination, affording a most valuable continuous mirror of medical and surgical progress, in their clinical aspects, and keeping us in touch with the best that is being done in them all throughout the civilized world. We doubt whether there is any other systematic publication of its kind that enjoys such widespread popularity, at least in this country, or one that deserves it more; for, there is no other series of which we know that furnishes so wide a range of progressive information in such practicable, usable form. It is interesting to note how large a place biologic therapy is now occupying in these clinics, which, of course, is as it should be. Yet, it is gratifying, too, to find that considerable attention still is given to medicinal treatment.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6078.—"Treatment of Pernio." H. H. B., Oklahoma, has several patients with "frost-bitten" feet. One of his own feet was also frosted, and ever since then, when the weather gets cold, the heels and sides of the feet begin to swell and are very painful. The joints of the little and great toe, on each side, are most affected. Can hardly bear a shoe. When the feet get warm they begin to pain, but if the shoe is taken off and the foot heated, by fire or water, the pain is relieved. "This trouble," the doctor says, "is extremely annoying, and I would like an effective treatment therefor."

The skin of a person subject to chilblains should not be heated suddenly, especially after exposure to cold, but the circulation should be re-established gradually by dry friction, or by rubbing the part with spirit of camphor; or the patient may rub with snow or ice-water before entering the house. The feet should be bathed daily in hot solution of epsom salt (water, three pints; magnesium sulphate, one tablespoonful), then dried carefully, and Guimethol rubbed in, or the following: Menthol, grs. 15; ichthyol, dr. 1; petrolatum, dr. 1. Also, equal parts of tincture of iodine and arnica may be applied with a camelshair pencil morning and night. Some practitioners highly recommend applications of tincture of ferric chloride, full-strength, at bedtime.

When a chilblain exists, a plaster having the following composition may be applied: Capsicum pods, 1 ounce, and alcohol, 1 ounce. Macerate for several days and add mucilage of acacia, 2 ounces; mix thoroughly, brush over sheets of silk, and apply to the affected area. Practically the same effect will be secured if oleoresin capsicum is used in place of the capsicum pods.

It is usually desirable to give individuals afflicted with pernio iron and strychnine in some form. The writer uses digitalin or cactoid, one or two granules, and two of the triple arsenates, three times daily.

When the skin is broken, the epsom-salt bath may be used and the parts then dressed with alicphen ointment (dried alum, grs. 5; ichthyol, grs. 10; phenol, grs. 5; basilicon ointment base) on gauze.

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QUERY 6079.—"Hemophilia." W. A. M., Iowa, has a case of hemophilia in a boy ten years old, and desires information relative to recent methods of treatment.

Without a clearer idea of general conditions we naturally hesitate to offer definite therapeutic suggestions, but most certainly, were we treating a hemophiliac, we should inject normal horse serum, with large doses of calcium lactate and chloride.

Hypodermic injections of emetine hydrochloride will control hemorrhage, even when severe, and should be used for that purpose.

As you are aware, the danger from hemophilia is proportionate to the age, in the young being greater; while as age advances danger lessens. In all pronounced cases, the outlook is decidedly unfavorable. You do not state whether there has been articular effusion. As you are aware, the knees are most commonly affected; next the ankles and elbows. Repeated effusions tend to the formation of adhesions, with partial or even complete ankylosis.

When the attacks are periodic, magnesium sulphate should be administered during the prodromata, with calcium chloride and lactate in full doses. Once hemorrhage has occurred, thymus gland proves most useful; 50 to 100 grains may be given daily, with local applications of a solution of the dried extract. Preparations of suprarenal gland are preferred by some practitioners. Tincture of perchloride of iron (in 1-2-dram doses, every two hours)

has been strongly advocated. We would substitute the triple arsenates with nuclein or the following combination: strychnine arsenate, gr. 1-128; iron arsenate, gr. 1-32; manganese phosphate, gr. 1-32; zinc phosphide, gr. 1-32. Gelatinous foods should be ordered and absolute rest insisted upon.

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QUERRY 6080.—"Delphinine in Senile Incontinence." T. P. F., Illinois, writes: "Please tell me how to use delphinine in the senile form of incontinence of urine."

Delphinine acts on the central nervous system. It has proven of service in spermatorrhea, prostatorrhea and some forms of incontinence and vesical irritability. The drug should not, however, be used during the persistence of an acute inflammitory condition.

Some observers report that the drug checks mucous, or muco-purulent discharges; and exerts, in a somewhat less degree, a tonic influence upon the vesical mucosa and the kidneys. In full doses it produces vomiting, giddiness, and convulsions. In reasonably full doses it may act as a laxative; but more often it promotes diuresis, and occasions feelings of heat and tingling in various parts of the body.

The eclectics regard staphisagria as a remedy for chronic inflammation and atony of the renal and reproductive organs. Scudder, for instance, considers staphisagria a specific for irritation of the urino-genital apparatus, especially in chronic irritation of the neck of the bladder associated with temporary enlargement or irritation of the prostate. Locke says that it gives marked relief in urinary incontinence of old men, with vesical and prostatic irritation, frequent teasing or urgent desire to urinate. In our own hands, however, eupurpuroid and arbutin, with small doses of berberine, have given better results in such conditions.

The usual dose of delphinine, 1-128 grain, every thirty to sixty minutes for a few doses, to effect, then every one to three hours as may be required to maintain the impression. Bear in mind that individual susceptibility varies greatly. Patients receiving delphinine should be ordered bland or mucilaginous beverages, barley water, for instance.

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QUERY 6081—"Climate for the Tuberculous." C. B., Quebec, inquires: "In what states besides California and Colorado can we find a climate propitious to the tuberculous? What do you think about Nevada, Utah, Arizona, and New Mexico?"

As you are aware, the best practitioners now admit that skilful medical attention in the home, even with inferior climatic advantages, is preferable to the best climate possible and inferior supervision.

Merely transferring the patient to a better climate does not mean much for his recovery. In the last stages of phthisis pulmonalis, it is worse than cruel to send the patient away from home and friends, especially when the necessary fresh air can be obtained in his own vicinity. As Hare remarks, "During the last century the climatic idea expanded so as to embrace every known variation—ocean voyages, sea and coast climates, inland regions with a high altitude and those with a moderate or low altitude, hot dry climates with a mean equable temperature, to say nothing of the supposed healing properties of pine forests."

The one essential feature which seems to have existed from the beginning is warmth, and it would seem that the original selection of warm climates was determined by the fact that it was a matter of common observation that respiratory disorders were less frequent during the warm, dry seasons than during the cold and wet months. Then, too, it was noted that a residence in a warn, dry region often had a beneficial effect on pulmonary disorders, such benefit undoubtedly being due to the fact that in a warm climate the patient spent more time in the open air, thus securing much needed oxygen.

New Mexico, Arizona, Nevada, California and Colorado all offer climates propitious to tuberculous individuals, but in sending a patient away, we must consider the conditions present in the individual. A high altitude should not be selected if there is disease of the cardio-vascular system, nephritis, anemia, marked nervousness or cavity formation. Hemorrhage cases are unsuitable for a high altitude.

It is often desirable to send the individual to some place where he can spend a great part of his time in the open air and not be subjected to a sudden change of temperature. When a patient is financially able to bear the expense, and the disease is not too far advanced, he may with advantage be ordered a "change of climate." Such a change, too, is advisable if the patient resides in a locality where the weather is extremely changeable during the winter and early spring months or extremely hot during the summer. When a man allows his business or profession to interfere with the treatment, he should go away and free himself for a time; so, too, the woman worried by

domestic affairs or exhausted by social calls may be sent away with advantage.

Thoroughly competent observers state that the benefits derived from a change are due not so much to a climatic influence as to a change of habits from those which are sedentary and confining within doors to those involving out-of-door life and activity, freedom from cares, anxiety, and annoyances of business at home, and it may be added, the moral effect of the hope of being benefited by climatic influences. We have all seen patients show slight improvement or steadily progress to a fatal issue in every variety of climate and there is no question that out-of-door treatment, properly conducted, proves effective in the eastern or middle as well as in the western or southern states.

In our own tuberculosis colony at Ottawa, where the results secured have been uniformly excellent, patients practically live out-of-doors, even in the winter months, and, while, of course, it may be a coincidence, in the writer's own experience of six patients in about the same condition three sent west benefited little while those placed in the Ottawa Colony seemingly recovered. We say, "three sent away benefited little." In fact, one of them died shortly after returning from Colorado.

To sum the matter up, it is our personal opinion, shared, we believe, by most men treating the disease, that where improvement may rationally be expected it will be secured more readily by proper sanatorial treatment at home than by forced sojourn in some distant state; however, when we do send a patient away, we should send him where the air is warm and dry in the daytime and the nights cool, and it is usually desirable to avoid excessive altitude. In every case, it is essential that the patient be so situated that he may have proper care, good food, and sanitary surroundings. Too many of the far-off tuburcelosis climates are lacking in these respects.

We believe that you can obtain on request from the Surgeon General's Department, Washington, a report covering the subject fully. You will find an exhaustive chapter on "The Role of Climate in the Treatment of Pulmonary Tuberculosis" in Bonnie's, "Pulmonary Tuberculosis and Its Complications."

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QUERY 6082.—"Administration of Salvarsan." A. C. J., Kentucky, asks: "Where can I get Ehrlich's '606,' or salvarsan? Can I use an ordinary 4-Cc. hypodermic syringe for intravenous injection? I have several cases in my practice in which I want to use this preparation. What is a good text book on this subject?"

Doctor, we strongly urge you to think more than twice before attempting to administer salvarsan. Its administration is best left to experts.

Presumably we need not tell you that salvarsan is sold in tubes containing 0.6 Gram in solution. The dose is from 0.3 to 0.6 Gram, the susceptibility of patients differing greatly. The later-introduced modification known as neosalvarsan is not as prone to cause undesirable byeffects or as intense local or systemic reaction as does salvarsan. Its dose is somewhat larger.

The more prominent constitutional disturbances following intravenous injections are these: In about six hours after the injection, there generally is malaise, chilling, more or less abdominal cramping, nausea, even vomiting. The temperature rises, from 101° to 104°F., the hyperpyrexia lasting about five or six hours. Profuse sweating may occur when systemic infection exists, and it results from the endotoxins formed from the killed spirochetes.

Intramuscular injections of salvarsan give rise to sciatic pains radiating down the legs, then acute pain develops at the site of the injection, which may last several hours. There also appears an erysipelatous condition about the point of injection and may gradually increase during three or four days. The induration usually disappears in from ten days to two weeks, although some nodules may not be absorbed for several weeks. The local reaction is milder when the suspension is used. The temperature rises to 101° F. Occasionally blood, albumin, and casts may be present in the urine; sometimes hematuria is observed.

Salvarsan and neosalvarsan, with literature concerning them, are obtainable of the Farbwerke Hoechst Co., New York City. An instructive chapter on this subject will be found in Guiteras' "Urology," Vol. II.

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QUERY 6083.—"Tachycardia. Frigidity." E. E. D., California, is treating for tachycardia of long standing a married woman, 28 years of age, who has had a number of abortions, but no living children. His statement reads: "There is a mitral lesion. She has had a Neisser bacillus infection, but no syphilis. She is a great deal troubled with gas on the stomach and with obstinate constipation. The Doctor has dosed her liberally with cactoid, hyoscyamine, glonoin, strychnine, bromides, chromium sulphate (4 tablets

a day), and veronal, also cathartics galore; besides ordering high enemata and rectal feeding. For days her heart beats faster than anyone can count, then rests a few hours, only to begin over again with renewed vigor. When the patient's condition is at its worst, there is no perceptible pulse at the wrist. Her blood pressure indicates 110. There is albumin in the urine. There is some dropsy. The only nourishment she can retain is malted milk, beef tea, and buttermilk. She is very much emaciated and weak. It seems that she must die soon.

"In your opinion would digipoten be of any service? It seems that the gas in the stomach and intestines has something to do with the attacks, for vomiting relieves the palpitation quickly. I have been led to believe that possibly there is an obstruction high up in the alimentary tract. I also have thought of some sequel of syphilis, perhaps an aneurism of the thoracic aorta; but she neither has pain nor can I elicit any bruit. How would 5 to 10 drop doses of chloroform or calcidin in large doses with ergotin work?"

Are you sure that your patient does not suffer from nephritis? Under the circumstances, we would hesitate to give veronal. We do not quite see where the indications for chromium sulphate appear.

Cactoid and strychnine ought to prove beneficial. In some of these cases sanguinarine given in alternation with cactoid works beautifully. Sparteine is another drug which, under such circumstances, deserves consideration. The main characteristic of the drug is an energetic stimulating influence of the heart, the pulsations of which it regulates while augmenting the energy of the contractions. It does not lower or raise blood pressure. The increase of energy is such that a tracing taken from a patient with advanced valvular lesions, one-half an hour after the exhibition of sparteine, will scarcely differ from that produced by a normal heart.

The drug has been termed the "cardiac metronome;" for if the pulse rate is below normal, the drug causes acceleration; and if accelerated, reduces it to normal. Moreover, the action of the drug persists. The vasomotors are not influenced; the phenomena of accumulation are not noticed; moreover, sparteine is eliminated easily by the kidneys, even in nephritic subjects.

This makes it a particularly valuable medicament in all cases of asthenia, with an unsound myocardium or an insufficient one, where the pulse is irregular, intermittent, and arhythmic.

We would not exhibit chloroform under the circumstances, but would give the patient sparteine and arbutin, and order her to drink barley water freely, two pints a day. Search carefully for pelvic infection. To relieve the gastric disorder give strychnine arsenate, gr. 1-128, quassoid gr. 1-64, papain (papayotin) gr. 1-32, juglandoid gr. 1-6, fifteen minutes before meals, and papain (papayotin) gr. 1-3, charcoal (vegetable), gr. 1, sodium bicarbonate gr. 2-3, half an hour after food.

It is impossible of course to prescribe very definitely with our limited conception of basal pathological conditions.

Our correspondent further asks what can be done for cold, passionless married women, but no satisfactory answer can be given.

Some years ago, echinacea was highly recommended for frigidity in women, but failed to meet expectations. As a matter of fact, the cause of this sexual torpor must be ascertained before anything can be done. Frequently this abnormal but fast-multiplying condition is of psychic origin. For instance, the woman may be as "cold as an iceberg" with relation to one man, but thaw out and become extremely passionate with another mate. More often, this state is congenital or else the function failed of development at the period of puberty, either through disease or as a consequence of physical and psychic exhaustion, such as especially our modern social life in its every phase implies. Whence the stigmatization, popularized by Sir Almroth Wright, as "the third, or neutral, sex."

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QUERY 6084.—"Treatment of Stammering." L., Tennessee, writes: "A boy of 15 years stammers or stutters very badly. He has been treated, without result, by a number of physicians. The father stutters some. Is there any way to cure the young fellow?"

To begin with, doctor, one should be careful to make a distinction between "stammering" and "stuttering." In stammering, individual sounds are produced with difficulty, while in stuttering syllabic combinations cannot be enunciated, as reference to the dictionary will show. We Americans seem to be rather careless in the application of these terms.

Stammering often is accompanied by some defect in the organs of articulation, the teeth, lips, tongue, or palate—which is not the case in stuttering. Naturally, the treatment must consist in careful training and the correction of whatever abnormalities may exist.

Stuttering is met with more frequently in boys than in girls, in the proportion of four to

one. The condition may arise from imitation, while heredity is an important etiologic factor. Not infrequently it is to be regarded as a mark of degeneration. Many children do not begin to stutter until they are six or seven years of age, or even older, but this writer many times has observed the defect at the age of three or four years. At the latter age, usually it is aggravated or even initiated by nutritional disturbances. In such cases, change of air, thorough elimination, and the administration of tonics prove beneficial.

When the condition has become habitual, or there is a hereditary taint, systematic and somewhat prolonged training, under competent teachers, in breathing and vocal gymnastics will be required. Several such institutions exist in our country. We suggest that you address the Secretary of the Board of Education of Chicago or of New York, asking him to put you in communication with such institutions, or you may write the Chicago School for Stammerers, 332 South Michigan Avenue, Chicago, Illinois.

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QUERY 6085.—"Chronic Migraine." C. M. W., Massachusetts, reports a case of chronic migraine of many years' duration. "The patient is a single woman of thirty-seven, of a high order of intelligence, is energetic, possesses considerable executive ability, and is an educational director in a large institution in the middle West. Our correspondent has attended her in hundreds of severe attacks of hemicrania, which sometimes last six days, and she has consulted many other doctors; but, instead of obtaining relief, these attacks are becoming more frequent. She is a "self-made" woman and, naturally, has worked hard to attain the fine position she holds today. "I have told her," writes the doctor, "that I think these excruciating headaches represent the 'kick-back' of the nervous system. I have eliminated practically every other cause. Her various functions seem normal and she is careful about here eyes and digestion. There seems to be no diseased condition of the genital organs. When I first knew her, menstruation occured every three weeks and bleeding was quite profuse. It took me two years to restore normal conditions, by means of internal remedies. She had severe acne rosacea, but this was entirely cured about five years ago by electrotherapeutic methods.

"If it were not for these severe attacks of headache, which compel her to go to bed, she would be one of the finest specimens intellectually and physically that could be found among our American women today.

"The woman is of medium height, has reddish-brown hair, abundant and curly; blue eyes; a skin not very fair. She is a small eater and rather particular about what she eats. She is not fond of desserts, but fond of candy; however, does not overindulge sweets. She takes only a small cup of coffee in the morning; does not use tea at all, and absolutely no liquors of any kind. She eats every kind of food but cereals. Eats very little fish and does not overeat in meat. Drinks lots of water. Is very fond of fruits and nuts. Likes outdoor life, but does not get enough of it. Is a good sleeper when she does not have her headache, and goes to bed in good season as a general thing. Knows the value of sleeping with windows wide open. In fact, she lives a thoroughly hygienic life and is well housed.

"I will give some idea of what an attack consists in. The pain is located in one or the other temporal region, sometimes affecting one eye on the same side, sometimes radiating to the side of the neck. It is steady and severe; may be throbbing, with sharp pains at intervals. It always nauseates her badly, but she hardly ever vomits. She has to lie down and close her eyes. Wants to be quiet and in a darkened room. Is obliged to loosen the collar, even though it may not be a tight one, and likes the rest of her clothing loosened. The most relief is from a hot-water-bag (very hot) held to the site where the pain is the worst. Sometimes sodium bromide will cause enough ease so that she can get to sleep. But sleep does not always send the headache away. She will wake up in the night and it will be as bad as ever; and she often wakes up in the morning and has to go to her day's work with it. Friction, such as firm rubbing, or using a coarse comb over the top of the head, seems to give her ease at the time. She does not want to eat or drink while it is the worst. Usually she lies very still with it, as though her powers were numbed. At other times (but this is rare) she will hold her head in both hands and groan, and look up like a suffering dumb animal and ask, 'What shall I do with my head?' She is quite stoical by nature, so, I know when she does the latter that the pain has driven her almost crazy. The headache leaves her scalp sore and tender. She complains of a sensation of numbness with the pain, and she looks stupid. She does not appear to have anemia."

Now, doctor, the essential point here is, to discover the underlying cause. You may be

aware that there is a tendency toward a decrease in the intensity and a complete disappearance of the condition at about or after the age of fifty. Also, recently attention has been called to a certain relationship between migraine and epilepsy, the epilepsy following, as a rule, after years of periodic migraine attacks.

In one woman, who died at the age of forty-two (of cerebral thrombosis), Jacksonian epilepsy developed during the last five years of her life. The attacks were limited to the right arm and that side of face, taking the place of the early typical migraine. At necropsy, extensive cerebral arteriosclerosis was found to exist. Lowered nerve tone, eyestrain, lithemia, and a score of other causative conditions must be considered.

We have found that these attacks frequently may be aborted by early and thorough purgation and small doses of cannabin and atropine.

In this particular instance, we should be inclined to give lecithin and nuclein, in alternation with the combined phosphates of calcium, iron, potassium, and manganese. Give a laxative saline draught every morning upon arising. At the slightest sign of recurrence, give calomel, gr. 1-6; podophyllin, gr. 1-6; bilein, gr. 1-12; half-hourly for four to six doses, followed by magnesium sulphate; then order minute doses of cannabin and atropine. Should an attack occur, you will find nothing to afford as prompt relief as this combination: acetanilid, grs. 2 1-2; sodium salicylate, grs. 3; ammonium bromide, grs. 3; caffeine, gr. 1; calcidin, gr. 1; charcoal, grs. 2; oil of cajuput, m. 1-2; the patient to take this dose with at least 4 ounces of hot water.

The age of your patient, and the fact that she is a brain-worker and has been under intense nerve strain for many years, would lead us to suspect more or less cerebral arteriosclerosis. We assume the eyes have been examined by a thoroughly competent optician. Pelvic reflexes may, we think, be excluded. The main essentials in this case are, of course, the maintenance of circulatory equilibrium and the elimination of waste.

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QUERY 6086.—"Chromidrosis." B., New York, writes: "A very peculiar color reaction that defies my chemical knowledge is manifesting itself in the perspiration of three of my patrons. These persons are, a husband and wife, not long married (the wife not quite six months pregnant), and the mother of the husband. It was first noticed that the younger woman's underwear under the arms and between the thighs was stained distinctively pink. She had been taking a cholagog tablet containing the sodium bile-salts and phenolphthalein, and I attributed the condition to the reaction between the phenolphthalein and the sodium. There was a fine erythematous rash, accompanied by a good deal of itching, over the forearms (anterointernal aspect), inner thighs and legs, later extending over the entire arms and legs. This now has practically gone. The acidimeter indicated absence of acidity of the urine. About one week later, the same discoloration was found on the husband's pajamas, and still later his underwear also was pink in places where he perspired. No symptoms were manifested. Soon after that, the mother's became similarly discolored, but she likewise had no untoward symptoms. Neither son nor mother have taken phenolphthalein.

"The stains are not decolorized either by ammonia or acetic acid; they are not bleached in the sun. Different kinds of soap have been used without effect. The stains seem to be intensified rather than dimmed by washing.

"No food different than formerly or anything unusual is being eaten. No new wall-paper has been hung, nor was any decorating done. The water is from the well or city water boiled and cooled, and is the same as always. The milk is believed to be untreated, and no change has been made in the dealer."

Doctor, you are probably dealing with a case of chromidrosis, a condition owing to the presence of certain chromatogenous bacteria; those most commonly predominating being a species of the leptothrix. These parasites are established in the hair follicles and the bacteria utilize the perspiration as food.

Uterine disturbances and constipation predispose to the invasion. The condition most commonly is encountered in women of the neurasthenic type. The fact that the young woman had taken phenolphthalein possibly might explain the phenomenon: inasmuch, though, as her husband and the mother had not taken any of the drug, the influence of outside agents must be excluded. It is rational to assume that the bacteria may spread from one member of the family to the other.

Doubtless the persistent use of a solution of hydrogen dioxide and (separately) of mild solutions of mercury bichloride would prove promptly remedial.

We suggest that you examine for leptothrix the hairs from the axillary and pubic regions and also skin scrapings from these areas.